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Four Detailed Questionnaires Will Be Basis For Latest U.S. Gasoline Report

By A. E. Heiss
N. P. N. Staff Writer

WASHINGTON, Aug. 30.

LACK of funds is causing the Federal Trade Commission's latest gasoline inquiry — that undertaken in obedience to the Trammell resolution adopted by the United States Senate June 3—to progress more slowly than its immediate predecessor, the McMaster investigation. Report in that inquiry was made in a little less than four months from the time President Coolidge sent Governor McMaster's tirade against gasoline prices to the Commission, Feb. 7, 1924.

Four questionnaires calling for information to be used in the present investigation are now in the hands of the industry. They are captioned:

"Special report on company organization for the petroleum industry in 1926."

"Special financial report for the petroleum industry for the years 1922,1923, 1924,1925 and for the first six months of 1926."

"Statistical schedule for petroleum marketers for the period Jan. 1, 1924 to June 30, 1926."

"Statistical schedule for petroleum producers; and statistical schedule for petroleum refiners."

Perhaps it should be said there are five lists of questions, because the last is divided as between producers and refiners, there being no such division in the other lists.

Generally speaking the questions are the same as those put to the various units in the industry to provide a foundation for the report of the McMaster charges. The questions about values and valuations have been changed somewhat.

Wanted Answers by Aug. 16

EACH list of questions is sent to the unit of the industry in question with the statement that the "Information requested in this special report is sought pursuant to senate resolution 31*** which directs the Commission to make an inquiry into conditions in the petroleum industry. It is desired that this report be mailed to the Federal Trade Commission, Washington, D. C., on or before Aug. 16."

There is no demand for information, nor an intimation that the Commission, in the event of refusal or an ignoring of the request, could or would undertake to force the oil companies to give the facts for which request is made.

Responses are coming in slowly. Thus far there is no indication that any considerable number of companies will decline to furnish the information. Much of it will be a mere extension of the data furnished in the spring of 1924 on account of the McMaster charges. In fact one of the schedules says that, if information was furnished in 1924, the information now given should be merely in addition to that furnished in that year.

Ask Details of Stock Holding

THE special report on company organization schedule sent to the industry in the present investigation calls for the number of stockholders of the various kinds; whether voting or non-voting, the amount of bonds outstanding; the names of the directors of the company, the name and location of refineries and the names of the chief products of each; the names and addresses of the fifty chief stockholders; the names and addresses of any of the fifty who hold stock as trustee or for the benficial interest of any other person or company; the name and address of the beneficiary and the holdings of the reporting company of stock or voting securities of other companies, as of Dec. 31, 1924 and 1925 and June 30, 1926 together with the names of the companies whose securities are held and the amount; and dates of acquisition, whether of securities or assets and percentage of such outside holdings.

The financial report data are to consist of: A consolidated general and departmental profit and loss statement (including subsidiaries) for the years ending Dec. 31, 1922, 1923, 1924, 1925 and the six months ending June 30, 1926; such profit and loss statement to show particularly such items as gross revenues from operations; total operating revenues; costs of raw materials and other costs, the latter to be specified; taxes; depreciation and depletion on original cost and additions; depreciation and depletion on revaluations; depletions on discovery value; net profits from operations; net income and net income sent to surplus.

Furnish Balance Sheet

THE companies are also to furnish consolidated balance sheets made up in a specified way, showing, among other things, the value set on good will, trade marks, patents, etc., and surplus, with fixed assets, depreciation, etc., set forth for each year and the six months period hereinbefore mentioned. There is also to be an analysis of the surplus account and another of the cash and assets received for each issue of stock, outstanding on June 30, 1926. The whole report is to wind up with a statement of the crude produced by the company and the amount of crude consumed at the refineries for the whole four years and the half year of 1926.

The questions to be answered by marketers for the period between Jan. 1, 1924 and June 30, 1926 are interesting. For instance they are to tell, by months, the quantities, in gallons, and the total delivered cost at the marketer's distributing plants of ordinary motor gasoline; water white kerosene and the marketer's

principal brand of medium automobile lubricating oil, specifying the name of the brand; the tank wagon prices at representative points in each state of the reporting company's territory on gasoline and kerosene, the replies to show the date of each change in prices and, if the tank wagon price includes a state or city tax, the amount of the tax is to be reported.

Ask Marketer's Margin

THE marketer is also to report the differentials between the tank wagon prices and the service station or retail prices for each of the reports covering representative points. He is also to tell what percentage of the domestic sales were made by the reporting marketer's own service stations and what percentage was sold to other buyers for resale, in 1925. The number of tank wagon and service stations is to be reported as of June 30, 1926.

Quantity of gasoline bought in 1925 is to be reported. The part bought under marginal contracts and the amount bought in the open market are to be shown separately. The marketer is also to furnish copies of the marginal contracts he had with refiners for the purchase of gasoline and kerosene in force in July, 1926. The basis of each marginal contract and the amount of margin per gallon of gasoline, for each contract, is to be reported for the period between Jan. 1, 1923 and June 30, 1926.

Quantities of gasoline and kerosene held in storage on Dec. 31, 1923 and at the end of each succeeding month to June 30, 1926 are to be reported, separately at all points, including bulk stations, service stations and in transit. In addition each marketer is to report the names of his competitors selling at retail in 1926. The name and address of each refining company, or wholesaler, from whom the marketer bought gasoline, in 1926, is also to be reported.

Want Producers' Records

QUESTIONS to be answered by producers include the following: Production of merchantable crude in each of the four full years and the first half of 1926; amount of crude bought in the same period; amount sold; stocks of crude held in tanks or in transit on Dec. 31, 1923 and each month thereafter to June 30, 1926; quantities of casing-head and natural gas gasoline produced, by years, 1923 to 1925 and the first half of 1926; number of wells completed and number abandoned in the four and a half year period; cost of drilling and equipping all wells; also the lifting cost and total cost of production, including depreciation and depletion, for oil only for each of the given periods; the acreage, by states, of petroleum land owned, or leased, or operated under "working agreements," June 30, 1926, showing proven and unproven acreage separately; and the acreage, by states, of proven and unproven petroleum land, separately, acquired by way of ownership, lease or operated under working agreements between Jan. 1, 1924 and June 30, 1926.

The schedule for refiners calls for the following: the f.o.b. prices per gallon, for each refinery, on ordinary motor gasoline, water white kerosene, and the refiner's principal brand of medium automobile lubricating oil, from Jan. 1, 1924 to June 30, 1926; tank wagon prices for gasoline and kerosene at representative points in each state of the marketing area; the difference between the tank wagon price and service station or retail price, the price data requested being the same as requested from marketers.

In addition the refiners are to report the amount of crude produced, the amount bought; the quantity and total cost of crude run to refinery, by months, Jan., 1924 to June 30, 1926; the amount of gasoline, kerosene, fuel oil and lubricating oil produced, by months from Jan. 1, 1924 to June 30, 1926; amounts of crude and products held, directly, or by subsidiaries, at all points in the U. S. Dec. 31, 1923 and at the end of each succeeding month to June 30, 1926.

Refiners are also to report their holdings of land. They are also to report on pipe lines, trunk and gathering, owned or controlled by them, directly or through subsidiaries and finally, they are to furnish a sketch map showing the location of pipe lines reported in answer to the preceding question.

CLEVELAND, O.—The eighth convention of the West Virginia Oil and Natural Gas Association will be held Sept. 28 and 29 at Parkersburg. Edwin Robinson. of Fairmont, secretary-treasurer, has announced only the date and place for the meeting, with program details yet to be revealed.

No meeting has been held since the fall of 1924. The association is headed by James H. Dye, of the Pure Oil Co., Charleston, W. Va., and John Flynn, of the Ohio Valley Refining Co., St. Mary's, W. Va., is vice-president.

Crude Price Changes

SHREVEPORT.—On Aug. 26 Louisiana Oil Refining Corp. reduced Urania, La., crude 15 cents, to $1.10 per barrel.

* * *

HOUSTON.—On Aug. 30 Humble Oil & Refining Co. reduced Gulf Coastal A grade crude 20 cents, to $1.40 per barrel, and reduced all B grades 10 cents, posting a price of $1.40 for oil below 25 gravity and increasing price 5 cents for each additional degree with top price of $1.95 per barrel for 35 and above. Humble also posted Spindletop grade A at $1.25, which is a reduction of 35 cents, and Spindletop grades B at $1.25 for oil below 25 degrees gravity, increasing price 5 cents for each additional degree of gravity making top price of $1.60 for 31 to 31.9, this being a reduction of 25 cents on all B grades for this field. For new prices see crude price table at the back of this issue.

Humble also reduced Mirando, Tex., crude 25 cents, to $1 per barrel.

* * *

Cut Due To Over-production

CLEVELAND, Aug. 31.—Over-production at Spindletop is responsible for the reduction in Gulf Coastal crudes posted Aug. 30 by Humble Oil & Refining Co. Daily output last week exceeded more than 80,000 barrels and with a number of wells certain to be productive due for early completion, the field possibly may pass 100,000 barrels daily.

CLEVELAND, Aug. 30.—The general offices of the Pure Oil Co. on Sept. 3 will be moved from Columbus, O., to 35 East Wacker Drive, Chicago, according to an official announcement put out by the company.

Index To Coming Meetings

Minnesota Petroleum Association, Kahler Hotel, Rochester, Minn. District Meeting, Sept. 3.

American Chemical Society, Bellevue-Stratford hotel, Philadelphia, Sept. 6-11.

Wisconsin Independent Oil Jobbers Association, Hotel Belmont, Green Bay, Wis., Sept. 15.

Virginia Independent Oil Men's Association, Jefferson Hotel, Richmond, Va., Sept. 15-16.

National Petroleum Association, Hotel Traymore, Atlantic City, Sept. 15, 16 and 17.

Regional meeting, American Association of Petroleum Geologists, Denver, Sept. 21-23. In conjunction with meeting of American Mining Congress, Sept. 20-24.

West Virginia Oil & Natural Gas Association, Parkersburg, W. Va., Sept. 28, 29.

West Virginia Oil and Natural Gas Association, Parkersburg, Sept. 28 and 29.

Ohio Gas & Oil Men's Association, annual meeting, Columbus, O., Oct. 5, 6.

Petroleum Division, American Institute of Mining and Metallurgical Engineers, Tulsa, Oct. 11-14.

National Petroleum Marketers Association, Atlantic City, Oct. 26, 27, 28.

American Oil Men's Association, Congress Hotel, Chicago, Nov. 16, 17 and 18.

American Petroleum Institute, annual meeting, Mayo Hotel, Tulsa, Dec. 7, 8, 9.

Michigan Independent Oil Men's Association, Detroit, Feb. 10 and 11, 1927.

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Distinguished Speakers to Address National Petroleum Association

CLEVELAND, Aug. 31

AN unusually interesting and important program has been arranged for the three-day meeting of the National Petroleum Association to be held at the Hotel Traymore, Atlantic City, Sept. 15, 16 and 17, according to the advance notice sent out by Fayette B. Dow, counsel of the association. All indications point to a large attendance, Mr. Dow says.

Distinguished speakers from outside the association membership will have a larger part than usual on the program. Here is a partial list of the speakers and their subjects.

"Products and By Products of Association Work," by O. P. Keeney, Tide Water Oil Co., president of the National Petroleum Association.

"The National Petroleum Association Twenty Years Ago and Today," by Judge C. D. Chamberlin, secretary of the association, Cleveland.

"Research and Development Work as Applied to the Oil Industry," by Frank A. Howard, president Standard Development Co. (Standard Oil Co. of New Jersey) New York.

"What the Fire Marshals Are Doing," by R. A. Wotowich, Cities Service Co.

"The Fire Alarm Rings," by Harry R. Lewis, Conewango Refining Co., Warren, Pa.

"A Year of Progress," by Fayette B. Dow.

"The Association's Adventure in Cooperative Engineering," by B. B. Stroud, McKean County Refining Co., Bradford, Pa., and director in charge of the association's department of manufacture.

"What I Have Learned from a Study of Twenty Boiler Houses," by Herbert A. Ross, mechanical engineer, of H. S. Bell's organization.

"Relation of Cost Accounting to Manufacture," by P. S. Tarbox, Independent Refining Co., Oil City, Pa.

"Reducing the Costs of Manufacture," by Jacob France, president Mid-Continent Petroleum Corp., Tulsa.

"Modern Stills," by H. S. Bell, New York, refinery engineer in charge of cooperative engineering program of the Pennsylvania refiners.

"Better Trade Relations," by E. M. Lyons, Tiona Petroleum Co., Clarendon, Pa.

"Marketing Problems and Practices," by speaker to be announced.

"A Traffic Department That Functions," by Frank B. Fretter, president the National Refining Co., Cleveland.

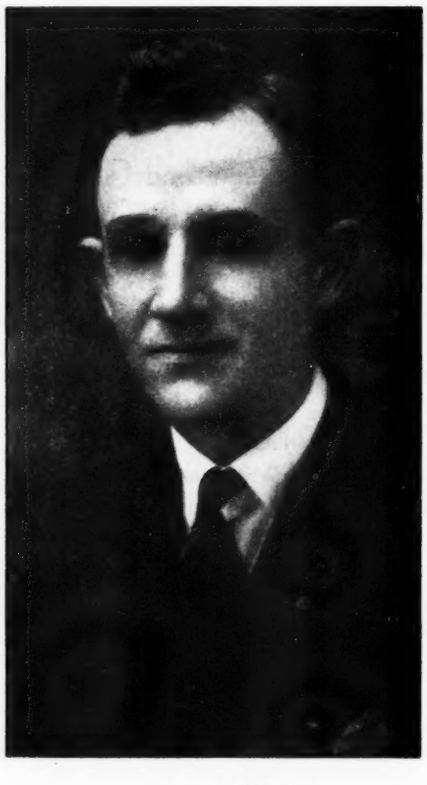
"The Interstate Commerce Commission's Order for a General Investigation in Rates on Petroleum in Central Trunk Line and New England Territories," by Willis Crane, National Petroleum Association, Washington.

"Avoidable Misunderstandings in Oil Tests," by Fred G. Clark, president Fred G. Clark Co. and director in charge of association's department of standards and tests.

"Discriminatory Legislation Against the Oil Industry," by Sheldon Clark, Sinclair Refining Co., Chicago.

Kermit Roosevelt will be the principal speaker at the annual dinner. He will give a talk on his recent hunting trip to central Asia illustrated by stereopticon slides and moving pictures.

Landsittel Goes With Randolph Petroleum



A. E. Landsittel

TULSA, Aug. 30.—A. E. Landsittel, who has been sales manager for the Globe Oil & Refining Co., since Feb. 15, 1923, has resigned effective Sept. 1, to associate himself with Lou Randolph in the Randolph Petroleum Co. No announcement has been made by the Globe as to who will succeed Mr. Landsittel.

Few refinery sales managers in the Mid-Continent field have had a wider experience than Mr. Landsittel. He entered the oil business 18 years ago with the Indian Refining Co. Later he was secretary and manager of purchases for the Export Oil Corp. for five years.

Just prior to his association with the Globe, Mr. Landsittel was sales manager for the Producers & Refiners Corp. He resigned in Feb. 1923, to manage Globe sales.

The Randolph Petroleum Co. engages in a general marketing business selling petroleum products in tank car lots. The company will sell the output of the Tonkawa Petroleum Corp. refinery at Tonkawa. This plant is operated by Capt. E. Constantin. Mr. Randolph will specialize in natural gasoline sales and Mr. Landsittel in refined products.

Sam Hunt Takes Position With Armoulds Co.

CHICAGO, Aug. 31.—Sam J. Hunt, lubrication engineer for the National Petroleum Marketers Association, Aug. 28 tendered his resignation effective Sept. 15. He has announced a new connection with Armoulds Oil Co. of Quincy Ill., where he takes charge of the lube oil department of a jobbing company that has experienced remarkable growth in recent years and is just now being departmentalized.

Mr. Hunt has been with N. P. M. A. slightly more than a year and the detailed work of launching the Red Hat Motor Oil campaign has been his task, which is virtually finished. A high grade motor oil will be on the market at stations of 100 or more members of Independent Oil Men of America by Sept. 15, Mr. Hunt says, under the trade name of Red Hat.

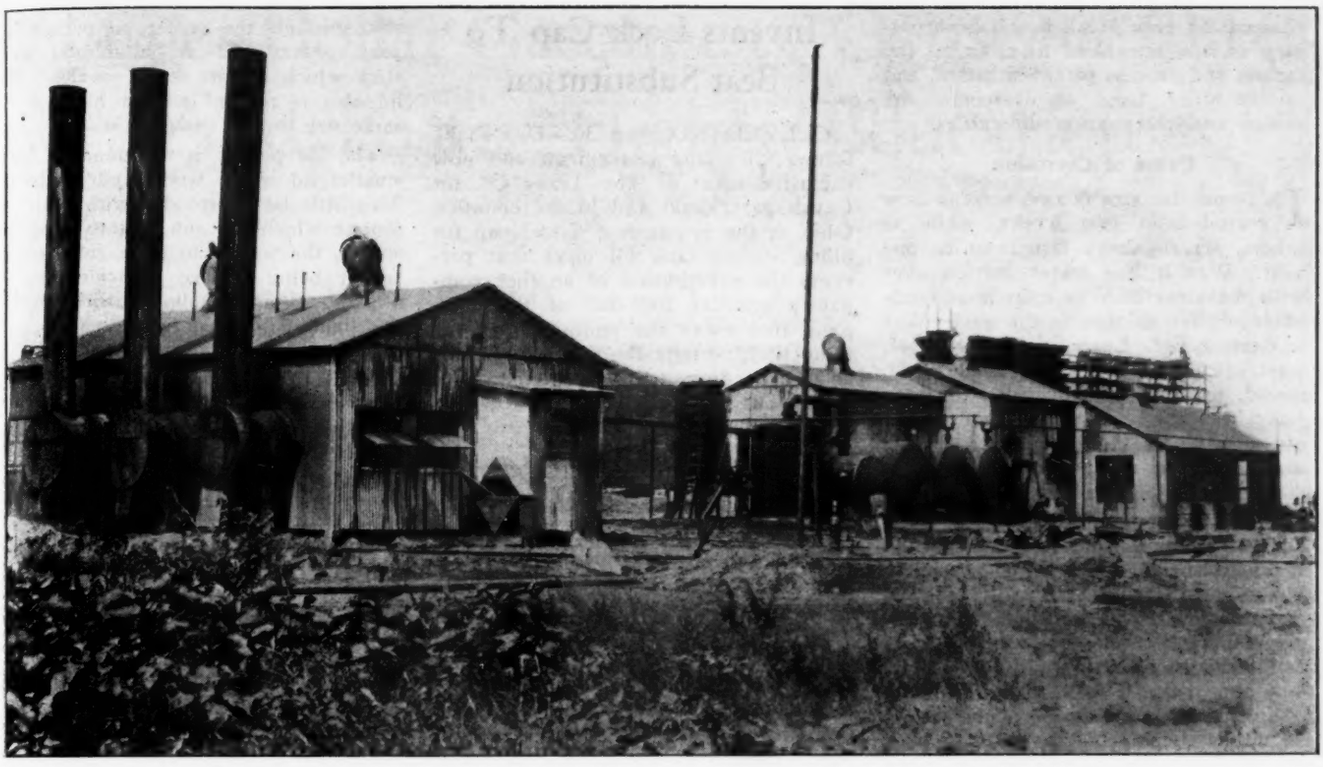
Already the initial list of compounders who will make Red Hat have been supplied with their stocks by refiners and they are turning out the finished product. Jobber members are placing orders with the association for estimated requirements and all are equipped with specifications, price lists and samples of oil and cans. Mr. Hunt's successor has not been named but Hunt leaves with the association's best wishes and appreciation for his accomplishment.

Organize Export Company

BROOKLYN, N. Y., Aug. 30.—The Pennsylene Oil Co. has been organized here with general offices at 193-195 Coffey St., to engage in export trade and cater to fleet owners in the Metropolitan district of New York on 100% Pure Pennsylvania oil.

B. W. Davis, who has been for nearly 15 years with the Indian Refining Co., and I. Kelman, who was formerly in the export and import business and has traveled abroad extensively, organized the new company. Mr. Davis was at one time district manager at Boston for the Indian company, and more recently was in sales work when the company was distributing under its own name in New York.

The export department will be in charge of Mr. Kelman.



Skelly Oil Co.'s No. 1 charcoal gasoline plant in the Panhandle oil field, Hutchinson County, Texas.

The Charcoal Process—Pro and Con

By Emby Kaye
General Superintendent, Gasoline Department, Skelly Oil Co.

THE advent of the charcoal process in the extraction of gasoline from natural gas has brought with it new problems that appear to be more difficult of solution than those experienced in the oil absorption and compression methods. There are technical and practical difficulties and economical considerations which must be given study and successfully answered before this process can be given a place ahead of the others or even along with them.

When in June, 1925, the Skelly Oil Co. installed a small charcoal plant for the treatment of raw casinghead gas, it did so to develop on a commercial scale the practicability of this process. The apparent success of the plant resulted in the construction of four additional plants by the end of 1925, and five more in the spring of 1926. Yet before the latter plants were completed, indeed even before they were started, it was realized that the charcoal plant as at present built is not sufficiently developed to justify its general use as a permanent plant on casinghead gas from oil wells. All but two of the plants were so-called "portable." The two permanent plants serve as huge laboratories to study the shortcomings of the process and should lead to improvements which will possibly justify charcoal extraction plants as permanent installations.

Unquestionably the strongest appeal of this process is the extremely high extraction efficiency at very low pressures. This means that great quantities of gas can be treated direct from wells or through compressors at pressures of from one to five pounds, and thus save the flush gas produced by large individual wells. Fifty per cent of the cost of an oil plant and 75 per cent of the cost of a compression plant is allocated to the various gas compressing facilities.

This money goes into relatively high staged compressors, headers, steel buildings, large valves and connections, coils, water coolers, and tanks, etc., which in addition to the initial investment mean expense during operation for lubrication, fuel, water, water treaters and compounds, paint, manpower, and machinery maintenance. It actually costs one cent per M to boost gas through the oil absorption process.

Lower Initial Investment

THE charcoal process can be given credit for reducing the initial investment as well as maintenance about 50 per cent on the gas facilities' costs, where it does not altogether eliminate the necessity for "boosting" the gas. The low pressure required is often maintained by the well operator, whereas comparatively few producers will maintain the 30 or 40 pounds necessary for the satisfactory operation of an oil plant, or the 250 pounds for a compression plant. On down the line, however, just as certainly as that oil and water do not mix, producers will all become educated to the point where they will realize the wastefulness of producing oil without back pressure.

Now and then a producer of the "new school" maintains back pressure and blows enough gas to flow his well. He is strong for conserving the gas to flow oil for time to come. He talks gas-oil ratio—the amount of gas needed to flow a barrel of oil, and points with pride to his modernity. All is well, 'til alas! his well declines rather precipitously. Then, lo and behold, his neighbor maintains five pounds less on a direct offset and is getting the oil. That is quick deduction. Down goes pressure—away goes gas-oil ratio, and things are as they were.

Nevertheless, California has seen the light and its producers maintain back pressure, at least as long as the well will flow even through a choker. Some day all oil will be produced that way, and, when it does, the chances are that the charcoal process will find in processing raw gas under natural pressure that the oil absorption will remain a keen competitor. For discounting expensive and elaborate machinery for compressing the gas to be treated, the oil process is as economical as it is simple. To give

charcoal an even break it will be necessary on the one hand to clear up the carbon and process patent situation, and on the other hand to overcome the screen and reactivation difficulties.

Cause of Corrosion

IN some plants of record, screens have corroded in two weeks, while in others, screens have lasted up to one year. Was it bad water carried over with the steam? Was it hydrogen sulphide or free sulphur in the gas? Was it electrolysis? Lead wool, glass wool, steel, alcumite, aluminum, lead sheet, monel, brass, clays and tile—all these have been tried. Was it a combination of causes? The technologists or the plant operators will find the elusive substance that will stand up.

Will a set of preabsorbers cleanse the gas so that its poisons will be deposited within them and leave the gas harmless in the absorber-stills? Or will the heavy ends in the gas and the sulphurous compounds break through in varying doses and partially fill the pores of the carbon and make it less effective? Will indirect cooling and drying of the carbon be ultimately effected in order to keep its efficiency after use up to that when used the first time? And, what about the legal tangles? Will they in the end be compromised?

So far, the Carbon & Carbide Company and Barneby Cheney are fighting in the courts on the right to manufacture "activated carbon." There are only two things certain about this suit and these are, first, the uncertainty of its outcome, and, second, that it will take a long time. Whichever party emerges as victor will no doubt challenge the Urbain Corp., the European manufacturers who have long controlled the overseas market and have now invaded America. Whether the foreign and domestic interests will clash or not, depends on the success of the Urbain carbon, a matter that has not yet been conclusively determined. All indications, nevertheless, point to success for this carbon of high activity and low retentivity, equivalent in the layman's mind of the quality of easily adsorbing and the ease of giving up what is adsorbed when subjected to increased temperatures and decreased pressures.

Up to this point the Gasoline Recovery Corp., licensers of the so-called charcoal process, has not been directly, even if vitally interested. It controls process patents and can do nothing without carbon. If Barneby wins, its lease on life will be increased, while if Barneby loses, an impasse will develop because Carbide will not sell carbon, and if it exploits a process (as it in fact is now doing), the Gasoline Recovery Corp. will have to sue for infringement or go out of business, or compromise, so that a reasonable royalty for carbon and process be divided and thereby put the process on a solid foundation and make its use less hazardous from a legal standpoint.

The more serious process clash that is imminent is that between the Urbain process and the Gasoline Recovery process. The Urbain process has a number of features which tend to set it off from the American process, and unless the basic idea of adsorption and distillation is declared an infringement, the foreign corporation has an even chance to impress its process on domestic manufacturers.

Aside from the carbon itself, the Urbain process has what appears to be many advantages, both as to first cost, and in the elimination of several pertinent operating difficulties. The action of the carbon after continued use, the support for the carbon, the carbon drying and distillation, are all features which command the closest respect, and a thorough trial of the whole process should be welcomed from a scientific standpoint, and the trial should be effected without regard to the ultimate legal problems involved.

In American plants, screen trouble has proven a serious handicap. Loss of activity attributable to a number of causes has been general with varying degrees of time; nor has the abrasion of the carbon been overcome. Whether or not the doors will be opened to Dr. Urbain to give relief to these problems depends upon the willingness of an oil company to take on another "Hope—Natural Gas" suit.

Invents Lock Cap To Beat Substitution

CLEVELAND, Aug. 30.—Dan Pfahl, former Cleveland councilman and now exclusive agent of The Texas Co. for Cuyahoga, Lorain and Lake counties, Ohio, is the inventor of a seal cap for filling station tank fill pipes that prevents the substitution of another company's gasoline for that of the company that owns the pump and at the same time permits the station operator at all times to gauge the contents of his tanks. Mr. Pfahl has applied for patents on his inventions.

The fill pipe sealing device is made in two types and two sizes. The sizes are to fit 2-inch and 3-inch pipes. The types are for pump equipped stations and for those where air equipment is used for dispensing gasoline. Both are made of aluminum castings. They are highly polished and handsome in appearance.

The first type consists of a heavy threaded collar and flange to screw onto the threads on the end of the fill pipe. Hinged to the collar and flange is a heavy lid. Coincidental ears on the flange and the lid are drilled coincidentally to permit their locking together by slipping a padlock through the two holes. An opening slightly larger than the dimensions of the fill pipe extends through the threaded collar and flange. In the top of the opening there is a ledge on which an aluminum spider rests. The spider has a rectangular slot through the center to permit the easy passage of an aluminum gage stick which is part of the device. The lid also is pierced with a hole of the same size to take the gage stick.

The lid proper is surmounted by a smaller lid which works independently. This little lid is provided with a pierced tongue which fits snugly into a slotted socket, the tongue and the sides of the socket being pierced coincidentally so a padlock can be slipped through and the small lid locked tight.

When the cap is put in place on the filler pipe of a tank, the edge of the pipe where it comes through the threaded collar, is peened down to make screwing the cap off impossible. A pin also projects through the hinge of the lid to prevent driving out of the hinge bolt.

The company owning the equipment puts in place the cap on the fill pipe to the tank. The lid is locked down and the little lid is also locked down. The company keeps possession of the key that opens the main lid and the man in charge of the station is given the key that opens the little lid. When he opens this lid, all he sees is the end of the gage stick with a convenient brass knob that makes it easy to lift through the small hole for reading. The gage stick is fitted at the bottom end with a crosswise pin that makes it impossible to pull it out, the gage stick slot being only large enough to give a running fit.

When the company's tank wagon driver comes, he unlocks the main lid and opens it. Then he removes the spider and sets the gage stick to one side, leaving a free opening for dumping his load. The model for use on tanks that must be airtight is on the same principle except that instead of a rather loose fitting lid, the main lid is secured by bolts swinging in slotted joints. A couple of turns of the wingnuts on the bolts, pulls the lid down tightly against an airtight leather gasket. Instead of a hinged gaging lid, the air tight model has a screw lid also fitted with a leather gasket.

Mr. Pfahl claims that his device makes the substitution of gasoline impossible while making it easy for a station man to keep a continuous gage on his tanks. The gage stick is marked off in inches and the scale, which is convex, is painted with a special black paint said to be impervious to gasoline and to prevent the gasoline meniscus from creeping and thus falsifying the gage.

Mr. Pfahl, who operates as Dan Pfahl, Inc., with headquarters at 6504 Union av., S. E. Cleveland, entered the oil business last November. He now has 14 filling stations and garages as retailers of Texaco products, including the "new and better gasoline" which he says is going over big in Cleveland.

PLEASANTVILLE, PA.—At the ripe age of 87, Orville S. Benedict, oil operator, died August 21. He was born at Enterprise, not far from the area where he began drilling as early as 1866.

Urges Dollar Gasoline to Conserve Oil And Foster Higher Education

By V. B. Guthrie
N. P. N. Managing Editor

"DOLLAR gasoline," the price La Follette, Sr. used three years ago to try to frighten the American public into some kind of legislative action against the oil industry, would be welcomed as an aid to petroleum conservation by Prof. John Ise, of the economics department of the University of Kansas.

In fact, that price or something near it, would serve other ends as well, the professor sets forth in his "United States Oil Policy," a book of 500 pages just off the Yale University Press. "Dollar gasoline" would limit the use of automobiles and tend to make folks stay home sometimes of an evening and turn their thoughts, perhaps, to the value of higher education, in which the professor is engaged for a livelihood. It would help bring back the horse into service, and Prof. Ise is for the horse.

High priced gasoline—real high, the sky the limit—the professor alleges would also soon cut down the big profits that men make in the oil industry and would prevent their living in such ostentatious fashion as makes their neighbors miserable.

Most of all, though, high prices for all petroleum products, and high production taxes to hold back development, together with the absolute withdrawal from exploitation of oil deposits on all government-owned oil lands, and strict federal or state regulation, of development of private oil lands, all are necessary, he sets forth, to save the nation's heritage of oil for future generations.

Prof. Ise, in his book, is an extreme conservationist. He foresees particularly a shortage of lubricants through exhaustion of petroleum in the life time of most of the readers of this article. "Most authorities on the subject would doubtless be willing to predict that the crude oil production of the country will fall below 100,000,000 barrels witnin 10 to 20 years. In other words, present indications are that we shall feel the shortage of lubricants within two decades, at most," he concludes, in his chapter on "Substitutes for Oil Products."

A Puritan from Kansas

HE holds the idea that self sacrifice on the part of the present generation is a necessary adjunct to true conservation. This and the fact he decries the luxury of life that so many of the present generation have, gives the book a Puritanical ring that leaves the impression that, no matter what his life has been, the reader has done much wrong.

And as for the man who has been engaged in the oil business, that he has done wrong, there is no room to doubt. He and his kind may be set down as criminals to the extent of $28,000,000,000, the reasoning being as follows:

"Assuming that the average price received for the seven billion barrels of oil thus far produced in the United States was $1, and assuming that this price would have averaged not less than $5 if the oil had been brought to the surface slowly enough, we may credit the oil producers who hastened the exploitation process with causing a loss of $4 a barrel, or a total of $28,000,000,000 worth of want satisfaction. This may seem fanciful, but it is in the main a sound line of reasoning.

"No practical oil man would ever agree with this, of course, but it is even a debatable question whether the United States might not even be better off if oil had never been discovered in this country, whether we might not be in a better situation if we had been using foreign oil for our necessary purposes, and still had our reserves in the ground."

No Amateur Conservationist

THAT about sums up the argument for conservation as Prof. Ise sets it forth. He is no amateur conservationist, either. Any man who reads the oil papers and government reports assiduously enough to glean 500 pages of material on his side of the question alone is no amateur. He has previously written and published "The United States Forest Policy," which evidently carries the same line of reasoning as his present work, and he expresses the hope that these may be but two of a series covering the land policy of the United States.

Yet, through the "United States Oil Policy" there runs a thread of argument, faint at times and stronger here and there, that suggests something of an ulterior motive for his belief. One finds the same argument in intimate conversational circles among teachers in schools and colleges generally. From the seclusion of the campus these teachers see their former pupils go out into the hurly-burly business world and make in a few short years more than they have been able to earn in a long period of teaching. You feel that Prof. Ise believes the industrial world should be forced, if necessary, to turn over more of its money—yes its profits—for the needs of higher education and those who are engaged therein.

"The net income the oil industry has paid in royalties and bonuses to landowners," he says, "if invested in bonds, would have amounted to about $200,000,000 income annually, very nearly enough to pay the total annual cost of the universities, colleges and professional schools of the United States."

Again, he says, "It is probable that the amount of capital wasted in the southern California oil fields, including excessive wells, refineries, pipe lines, storage and other plant and equipment, and including capital wasted in unwise speculation, would be almost enough, invested at a reasonable rate of interest, to pay all the costs of higher education for the entire state for the indefinite future. Almost infinite good might have been accomplished with what was ignorantly wasted, to the absolute detriment of the people."

Again further along the same thread is picked up, "Oregon has considerable areas of timber lands which may some day contribute materially to the support of her educational system."

Only One Side Presented

THE title to Prof. Ise's book is misleading. It should have been labeled an argument for conservation, since little, if any, attempt is made to set forth any views except those of an ultra-conservationist. Yet practical oil men will agree with much that he says. In fact, the actual operating oil companies have themselves labored for and secured a degree of conservation which Prof. Ise does not acknowledge. He lumps as the oil business its operating companies; stockholders intent on dividend returns, among this class professors and teachers; and speculators drawn into the business for short periods. He sets up the picture of the entire industry rushing to exploit as quickly as possible all known oil deposits for the immediately forthcoming dollar. He does not credit the operating heads of the business with even that selfish interest which would cause them to endeavor to protect as much as possible an investment of some nine billions. He does not recognize that it is of as much interest to the oil companies to protect this property investment against a shortage of petroleum supplies on which to operate as it is to the public generally to be assured of future supplies.

Underestimates Resourcefulness

AGAIN he does not recognize that quality of ingenuity and resourcefulness on the part of the human race which has always made falsehoods of dire predictions as to the future of human kind. That same ingenuity has already enabled the oil industry to meet the gasoline demands of the country

adequately from a supply of crude which even a few years ago would have been insufficient.

There are always two views of conservation, and both equally decry clear waste of any human resource. One view recognizes the prior right to the natural resources by the generation which uncovers and brings them into use. The other and theoretical view would lock up much of these resources from the present generation for future posterity without assurance that coming generations might not spend them as wantonly as it is charged the present generation is doing and without assurance they would have any need for them. When Prof. Ise says it would be better for this country had its own petroleum resources not been discovered, he aligns himself with the latter class

His views on increased taxation of the industry as one means to bring about conservation are interesting enough to go into detail upon. They are to be found mostly in his chapter on "Conclusions."

Prof. Ise would bring about a price for crude which would be so high as to force the development of the most available substitute for petroleum. He looks upon shale oil as the nearest substitute in availability and sets a price of $5 a barrel as a price at which oil could be developed from shale. He would secure the equivalent price of $5 a barrel for well oil partly through increased taxes on production, through taxing away most of the royalty and bonuses accruing to landowners and by increasing gasoline taxes to maybe 20 cents a gallon. The Professor says:

Would Tax to Stop Development

"A COMPLETE scheme of taxation for the oil industry then, drawn with the purpose of conserving our oil resources, and to some extent human and capital resources, would include the following: a heavy tax on crude production, graduated according to the flow from the wells; a heavy unearned income tax upon royalty receipts; and a heavy gasoline tax, to be considered as a supplement to the production tax. With such a schedule of taxation, it is clear that oil producers should be exempted from most other taxation, and refiners should be permitted to charge whatever they wish for gasoline."

A production tax of $1 a barrel, he goes on to show, would yield at the present rate of production a total of over $700,000,000 a year; $250,000,000 from California, $160,000,000 in Oklahoma, $130,000,000 in Texas and so on. This would do away with other forms of taxes in these states and possibly other oil producing states.

Prof. Ise brings up the point, but to this writer does not give sufficient importance to it, that non-producing states, called upon to contribute so heavily to the support and welfare of say Oklahoma, through greatly increased prices for their gasoline and other oil products, would undoubtedly indulge in retaliatory taxes, which would shove up to high levels the prices for other commodities in which they are deeply interested. The point could be made also as to how much funds from taxes would be spent by the state, whether intelligently or with considerable waste of capital and the building up at the same time of powerful political machines.

Would Be Unpopular Tax

SUCH an increased production tax, be it state or federal, would not be a popular tax, for the popular view of conservation is not that of calling on the present generation to sacrifice for the benefit of future dwellers in this country. Nor would it be regarded as fair to levy all taxes, or even an undue portion of them upon one industry. Also this and other taxes increasing greatly retail prices for petroleum products would have to be accompanied by relatively as high import taxes, or foreign oil companies would come heavily into this market underselling domestic companies. These high import taxes would be resented abroad.

Another form of tax Prof. Ise advocates is on all new wells drilled, so as to reduce their numbers. He would "appropriate" through tax the income to land owners from royalties or bonuses. "It is certainly unfortunate if there is no practicable way of appropriating these incomes," he says; and again, earlier in the book, "Since the landowner, as landowner, has rendered no valuable service, there is no economic justification for a system which permits them the use of any of their wealth."

Of the gasoline tax, he states: "The gasoline tax should be far heavier than has been imposed in any state—at least ten cents a gallon and perhaps more. At this rate the tax would make gasoline pay more nearly its fair share of road maintenance." He says now gasoline pays only 8 per cent of the billion dollar annual expenditure for roads.

That Isn't All, Though

TO the end always of conservation Prof. Ise advocates government regulation through two means. First he would have the government not only withdraw the present public lands from private development, but he would also have the government take over private lands wherever possible through outright purchase. Second he would have close government regulation of all operations on what private lands remained. The advantages of government ownership and operation of oil lands he sets forth as;

One—Oil resources could be withheld until the government deemed it time to develop them.

Two—It could bring about more efficient development, when they were opened, than under the present competitive system.

Three—Could reduce the amount of capital necessary to exploit resources. Speculation would be done away with.

Four—Reduce the number of idle landowners, formerly drawing royalties and bonuses from oil found under their lands, and making funds available for public improvements, among them schools and education.

If all the above, through taxation and government regulation, did not secure conservation, then Prof. Ise would call upon the government to ration oil and its products, by preference among users. "Unimportant uses would have to be eliminated by direct government action," he says.

There you have Prof. Ise's program for the oil business. He might be set down as a Puritan Conservationist, from Kansas, from which state many strange theories have come in the past.

Sinclair Pipe Will Lay Lines In Kansas

CHICAGO, Aug. 30.—Sinclair Pipe Line Co., owned equally by Sinclair Consolidated Oil Corp. and Standard Oil of Indiana, will lay additional lines to serve the pools in Russell and Rice counties, Kansas.

New lines will consist of an 8-inch loop laid along present line from Humboldt, Kansas, 30 miles westward and another short loop west of Neal for 6 miles. There will be an 8-inch line from Eldorado to the Rice county pool near Wherry, Kans., and thence 6-inch to the Russell county pool near Fairport, Kans. In all there will be 98 miles of 8-inch and 93 miles of 6-inch line in the new work, including gathering lines.

Illinois Pipe Line Co. Elects Vice-President

FINDLAY, O.—Charles Bunje, Jr., has been elected vice-president and director of the Illinois Pipe Line Co., succeeding the late W. E. Badger, whose death occurred three weeks ago.

Mr. Bunje came to the general offices in Findlay from Elwood, Ind., where he was superintendent of trunk lines in the Illinois-Indiana division. He entered the employ of the Ohio Oil Co. in 1907, in the pipe line department, and when the dissolution decree caused the formation of the Illinois Pipe Line Co. in 1912, he joined the new company as a mechanical engineer. All his experience in the oil industry has been in pipe line work. Following his graduation from Stevens Institute of Technology, he served in public utility fields in the East, leaving that industry to come to Findlay.

TULSA.—The geological firm of Wood & Wood recently completed examination of a large block of acreage in Dallam county, Tex., on which they mapped a promising geologic structure. The firm obtained a large block of acreage and test well is to be drilled at once in conjunction with the Tulsa operating firm, Smith & Downey. The location is in the northwest quarter of Sec. 19, Block 17, Capitol Syndicate survey.

Shallow Sand Pools Prove Profitable Central Texas Developments

By Paul Wagner
N. P. N. Staff Writer

HOUSTON, Aug. 28

SAND pools along the west and southwest fringes of the Ranger black lime territory continue attractive to oil operators because of the low cost of development and their relatively profitable returns on money invested.

Drilling depths generally range from 200 to 2100 feet and the producing sands vary in thickness from five to 30 feet. The time required for completing wells with standard rigs and portable drilling machines is never in excess of 30 days and frequently a well is put down to the pay horizon in less than a week, according to depth and locality. The cost of completion varies from $1,000 to $20,000, according to depth.

In many of the pools, wells come in for initial productions ranging from 25 to 100 barrels daily, but there have been notable exceptions to these relatively small yields in the development of the Roeser-Pendleton field, in central Shackleford county, and the Blake pool, in northern Brown county.

The discovery well of the Roeser-Pendleton area, which was completed in February of the present year, made maximum daily production of roundly 1200 barrels at total depth of 1346 feet. The Blake pool, which produces from a sand averaging 20 feet in thickness at about 1100 feet, had a number of 1000 barrel wells to its credit; and many of the Blake pool wells come in for 300 to 500 barrels, initial production.

Areas of Pools Small

GENERALLY the sand pools of the broadly termed Ranger territory are small in their individual areas, but the Blake development has been extended to possibly cover 800 acres and the Roeser-Pendleton field lines have not been limited as yet.

The irregular character of sand lenses found in the shales tends to make for many pools of limited extent in the district rather than fewer fields definitely connected up over large areas such as might be expected were blanket sands present.

As shown on the accompanying sketch, the sand pools west and southwest of the Ranger black lime area extend from Shackleford county on the north to McCulloch county on the south.

Inside the area of deep development there are a number of shallow sand pools, most of which were drilled up contemporaneously with Ranger lime operations in Comanche, Eastland and Stephens counties. The shallow fields northward from Sipe Springs to the Hohertz pool never gave the attractive return that may be credited to the western group as a whole.

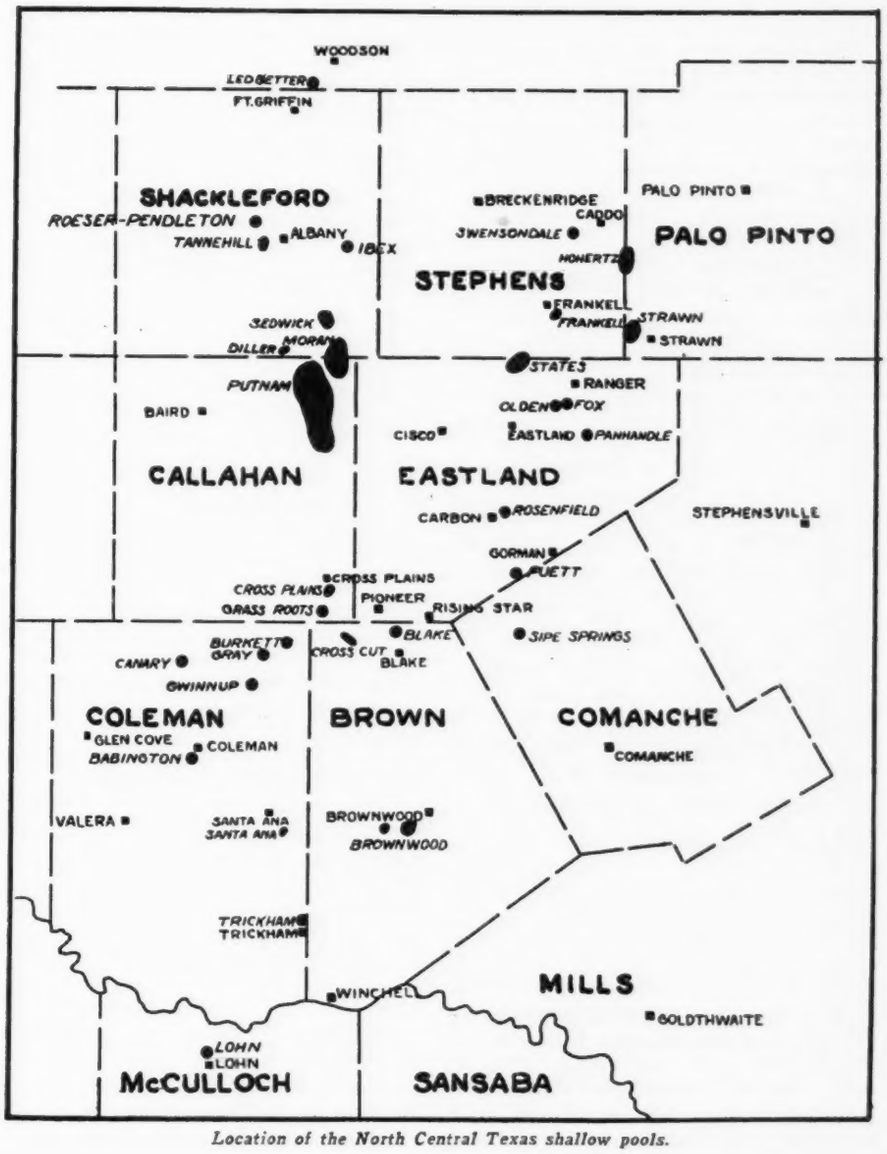
The older pools in Palo Pinto, Stephens, Eastland and Comanche counties are not showing much activity at the present time. The active areas are Shackleford, Callahan, Brown and Coleman counties, with renewed interest in McCulloch county, where a few small wells in the Lohn pool have produced 42 gravity oil for years at a depth of about 400 feet.

Distribution of Production

The Roeser-Pendleton development accounts currently for about 7600 barrels daily and the Blake (Stover) pool for about 5400 barrels out of a total of 42,500 barrels accredited to all sand areas in the general Ranger territory.

Total production in Shackleford county, where the Roeser-Pendleton (Cook ranch) pool is located, amounts to roundly 11,500 barrels, including the Ibex, Moran, Sedwick, Diller and Tannehill pools. Brown county production of 11,000 barrels daily includes Cross Cut and Brownwood production in addition to the yields made in the Blake pool.

Sand pools in Callahan and Coleman counties account, respectively for 4625 and 1920 barrels daily. The line of sand pools extending northerly from the Sipe Springs area, in Comanche county, through Eastland and Stephens counties



Location of the North Central Texas shallow pools.

into Palo Pinto, give up combined production of about 3200 barrels daily.

Treating the shallow sand area as a whole, operators depend almost entirely on geologists in drilling prospective acreage. Structures consist mainly of surface "nosing," or wrinkles. One is about as dependable as the other. "Nosings" are to the west and northwest. Operating experience has shown that north and northwest of the axis of a "nosing" is the most likely producing acreage.

Wells Soon Go On Pump

WITH some exceptions, notably in the Roeser-Pendleton area, wells are pumped soon after their completion, leases being equipped with band-wheel or gear-driven powers. Each well is equipped with a pumping jack operated by a rod line from the well to the power. The powers frequently operate from 20 to 40 wells. In some cases, although the practice is by no means general, a single pumping unit consists of a jack driven by an electric motor.

Pumping powers vary in cost from $1,500 to $5,000, including buildings and the installation of machinery. Portable pulling machines and Fordson tractors are generally used for pulling rods and tubing.

Net lifting costs, not including overhead expense, vary from 20 cents to 60 cents a barrel, the average daily production per well for the entire shallow sand district (Roeser-Pendleton development excluded) being between eight and 10 barrels. This average has been increased somewhat by the relatively large wells in the Blake pool.

Natural Gasoline Recovery

SOME of the shallow sands have no profitable casinghead gas, but in other areas the raw natural gasoline content varies from one and a half to four gallons per million cubic feet. Phillips Petroleum Co. has a gasoline plant in the Cross Cut pool of northern Brown county; Humble Oil & Refining Co. has an absorption plant in the Blake pool; Skelly Oil Co. is operating a portable charcoal absorption plant in the Gwinnup pool, in Coleman county; and the Phillips interests also take gas from some other pools, including Moran.

Crude oil purchasers in the district include the Humble, Prairie, Texas, Magnolia, Gulf and United Producers pipeline companies, none of these buyers, however, being connected to all pools.

Brown-Coleman Areas Active

WITH the exception of Cook ranch development in Shackleford county, which is mainly controlled by Roeser & Pendleton and the Marland Oil Co. of Texas, the most active area in the Ranger sand district comprises northeastern Coleman and northern Brown counties. The shallowest development in this territory is the Burkett pool, where a producing area a half mile wide by three-quarters of a mile long yields about six barrels per well per day, settled production, at drilling depth of 350 feet. The pool, which is several years old, was developed mainly by the Canyon Oil & Gas Co.

Burkett, Cross Plains and Cross Cut development stimulated the search for other sand pools in their immediate vicinity, with the result that the present year has been one of unusual activity in Brown and Coleman counties. For the most part, operations in southeastern Callahan and southwestern Eastland counties had preceded present activity in this territory.

Cross Cut, which produces from a single sand found at about 1240 feet, is located east and southeast of the town of Cross Cut, in the W. B. Travis, William Miller, G. Logan, and E. T. R. R. Co., surveys, in northwestern Brown county. The pool is roughly a mile wide and two and a quarter miles long. Sand thicknesses average about 20 feet.

The cost of completing a Cross Cut well, using 600 feet of 8¼ and 1200 feet of 6⅝ inch casing, approximates $8,000. Drilling contracts are on a basis of $2.25 a foot, gas and water furnished.

The Blake pool, which is also known as the Stover development, is about four miles southwest of the town of Rising Star. Its best wells are in the Juan Delgado survey, although the producing area has not been entirely defined.

Blake pool production comes from 20 feet of sand found at about 1100 feet. Wells are completed at contract cost of about $6,000, using generally 560 feet of 8¼ and 1080 feet of 6 5/9-inch casing. Drilling time is generally about three weeks.

Two shallow producing horizons are found in the Brownwood pool, which is located immediately south and southwest of the town of Brownwood. The sands are at 290 and 400 feet. The pool, which is about 10 years old, covers an area four miles long and two miles wide. There is scarcely any activity in this pool at the present time. Its roundly 250 wells average about 65 barrels combined daily production.

Six miles west of Brownwood, in the Manuel Flores survey, a pool developed with portable drilling machines has been averaging about seven barrels per well per day from roundly 50 wells; and in the extreme southwestern part of Brown county, three miles southeast of the town of Winchell, a small well was reported several months ago at 320 feet.

The Gwinnup pool, on the Dibrell ranch, has been recently one of the most active developments in northeastern Coleman county. The discovery well was drilled last January, coming in for 600 barrels, initial production. Like the Cross Cut and Blake pools, the Gwinnup development is from 20 feet of sand, but at greater depth. Gwinnup pool production is found at about 1800 feet.

Other Coleman county pools include the Burkett, in sec. 163 and in blocks 2 and 3 of the John Sands survey, which has been hereinbefore discussed; the Gray pool, in secs. 175 and 176, three miles west of the town of Burkett, where four wells several years old produce about 10 barrels daily at depth of 2465 feet; Canary pool, in sec. 72, G. M. Mann survey, where the discovery well made 40 barrels daily at 2768-2775 feet; Babington pool, in sec. 736, Samuel Crooks survey, one and a half miles southwest of the town of Coleman, where four wells making 12 barrels daily at 400 feet are several years old; Santa Ana pool, in sec. 751, west side of Manuel Martinez survey, producing 50 barrels daily from 13 old wells drilled to 1465 feet; and the Trickham pool, near the town of the same name, making small production from "lean" oil horizons found at 1000, 1100, 1770 and 1900 feet.

Cook Ranch Development

THE Roeser-Pendleton pool, in Shakleford county, is located on the Cook ranch, four and a half miles north of the town of Albany. Roeser & Pendleton originally owned a lease on the entire ranch, but they sold a half interest in most of the acreage to the Marland Oil Co. of Texas, retaining a full interest in only a few checkerboard pieces.

Time required for completing wells in the Roeser-Pendleton pool is about three weeks. Wells cost roundly $10,000 to complete into tanks at contract price of about $2.50 per foot, fuel and water furnished. It is customary to use about 620 feet of 12½-inch; 800 feet of 10-inch; 1080 feet of 8¼-inch; and 1320 feet of 6⅝-inch casing in drilling the wells. The 12½-inch and the 10-inch casing are pulled after completing a well.

One and a half miles southeast of Roeser-Pendleton development, in the southeast of the northwest of sec. 58, a 10-months old well of Hays & Holland is good for about eight barrels daily at 1200 feet. Three miles east, in the southwest of the northwest of sec. 29, Engle Bros. drilled a 50 barrel well to 1240 feet last April; and in secs. 4 and 5, block 12, T&P RR survey, French & Lewis, and the Humble and Midwest companies, are going ahead with testing operations.

In the southern edge of Throckmorton county, about 15 miles northeast of Roeser-Pendleton development, the Humble Oil & Refining Co.'s Leobetter test showed for about 30 barrels daily of 37.5 gravity oil at 775-778 feet, some time ago. The Humble got the oil showing in a 12-inch hole being drilled for a deep test.

Three miles west of Albany, a narrow area about a mile and a half long has been producing nearly 200 barrels daily from about 30 wells at 975 to 1300 feet. This area, known as the Tannehill pool, is located in secs. 11, 12, 13 and 24, block 11, T&P RR survey. The pool is about three years old.

Other Shackelford county pools are the Ibex, located in the south half of the Blind Asylum survey, in the east

central part of the county, where eight wells make about 175 barrels daily from producing depth of 2065 feet; Sedwick pool, about six years old, in secs. 7, 15, 67, 68, 69, 70, 71 and 72, Lunatic Asylum survey and secs. 20 and 44 of the Orphan Asylum survey, making 800 barrels daily from 200 wells, at producing levels comparable with the Moran pool; Diller pool, in secs. 29, 31, 42, 47 and 48, Lunatic Asylum survey, producing 225 barrels daily from about 50 wells completed at roundly 500 feet; and the Moran pool, original sand development in this part of Texas, which is now about 15 years old.

The Moran pool, near the town of the same name, produces approximately 500 barrels daily from roundly 100 wells at levels of 380, 534 and 610 feet. These producing horizons are equivalent to the pay levels of the Sedwick pool.

Putnam Area Extensive

PUTNAM development has been the most extensive in Callahan county, accounting for more than 1000 wells now yielding in excess of 2000 barrels daily production. Development covers a considerable area in the northeast part of the county, north and northwest of the town of Putnam. No attempt is made here in to identify the several pools, as locally identified, the area being treated more broadly as a field.

Producing depths range from 400, 460, 512, and 600 to 1750 feet. Wells are drilled with cable tools and are pumped with jacks attached to powers.

In the Cross Plains townsite pool, in Callahan county, the producing area is a mile long and a half mile wide. The single producing sand, which compares in thickness with the Gwinnup, Blake and Cross Cut pools, is found at 1440 feet. The field, which was discovered in July 1925, has been about drilled up.

Wells were completed in this pool at contract price of $2.25 per foot, fuel and water furnished, and generally at equipped cost of about $10,000. Standard derricks, if built, were torn down and a pumping jack installed at each well to operate on power. The 80-odd wells in this pool have recently averaged about 1200 barrels daily combined production.

Southwest of Cross Plains about three and a half miles, in the southeast corner of the Comal county land survey, is the Grass Roots pool producing at about 365 feet. The pool is a half mile wide and three quarters of a mile long. Production is nominal, the discovery well making 40 barrels, daily maximum, but it costs only about $1,000 to complete a well of this type with 350 feet of 6⅝-inch casing in the hole.

Eastland County Pools

EASTLAND county sand development, being generally contemporaneous with Ranger deep pay drilling and now inactive, is mainly interesting for the purpose of completing the picture of shallow operations in the general territory.

The Olden pool, near the town of that name, produces 39.2 gravity oil from 1465 feet, at which depth 32 wells are making roundly 900 barrels daily. The Fox pool, in secs. 2 and 3, block 2, H&TC RR survey, one and a quarter miles east of Olden, makes 20 barrels daily from 13 wells at 1340 feet. Five miles southeast of Olden, in the William Van Norman survey, 36 wells making 160 barrels daily, are about 1170 feet deep.

Five and a half miles northeast of the town of Eastland, a pool developed about seven years ago by the States Oil Corp., in secs. 7, 8, 17 and 18, block 4, H&TC RR survey, and paralleling the Eastland-Stephens county line in secs. 127 and 128, HT&B survey, is making about 600 barrels daily from 30-odd wells. Sand pay is found in three horizons at 1600, 1700 and 1900 feet.

Rosenfield is a prospect rather than a proven pool, although one well in the southwest quarter of sec. 6, block 2, H&TC RR survey, showed for about 15 barrels daily in sand at 480-487 feet when drilled in the latter part of 1923. Black oil found in this test had a gravity of 28.7 degrees.

The Puett pool, in the G. W. Robertson survey, six and a half miles south of the town of Carbon, has to its credit eight wells producing 30 barrels daily. It was discovered in 1920, but underwent little development. The producing horizon is found at 2270 feet.

Stephens County Yields

SWENSONDALE pool, in Stephens county, four miles southwest of the town of Caddo, in the Orphan Asylum survey, yields about 200 barrels daily from roundly 40 wells completed at 1800 feet. It was developed contemporaneously with deep lime production in the vicinity.

Parts of the shallow area of the Frankell pool were developed about the same time as the Swensondale sand production, but additional Frankell wells have been drilled within the last three years. The pool is located in sec. 50, block 6, T&P RR survey, a mile and a half southeast of the town from which it takes its name. The producing horizon is found at 2050 feet.

The Strawn pool, in Palo Pinto county, is antedated for sand development in this part of Texas only by the Moran pool, previously described under Shackleford county. The producing horizons are at 1600 and 1800 feet. Its roughly 75 wells are still making roundly 125 barrels daily. The Hohertz pool, north of Strawn, is similar in its characteristics; it is, however, of somewhat more recent development and it is making about 825 barrels daily from 100 wells.

The Sipe Springs pool, two miles south of the town of that name in Comanche county, produces at 250 and 400 feet. Its 170 wells are making combined production of about 150 barrels daily.

The Texas Co. Organizes Holding Company

NEW YORK, Aug, 28.—The Texas Corp., a holding corporation, has been chartered in Delaware to acquire the entire capital stock of The Texas Co. The authorized capital stock is $250,000,000, shares of $25 par value.

The purpose of the new corporation is to avoid the many restrictions of the Texas corporation laws which impede The Texas Co. in meeting many problems of competition from companies chartered in other states. The new corporation would be able to hold unlimited stock in other companies thereby permitting the expansion of the Texas organization, a thing that it is not permitted to do under its present charter.

An offer of exchange of stock of The Texas Co. for The Texas Corp. stock is expected to be made soon. Stock of the present company is to be deposited with the Chase National bank at New York before Nov. 1. Unless 50 per cent of the stock is deposited the holding company plan which has been approved by directors and large stockholders, will not become effective, Amos L. Beaty, chairman of The Texas Co., announced.

It is the intention that the new corporation shall own all of the stock of the present company. If the plan is accepted by the holders of a majority of the present company's stock, the latter will be withdrawn from the New York Stock Exchange and application will be made to list the corporation's stock.

It is known that The Texas Co. has been anxious to build up reserves of crude oil and limitations placed by Texas laws on the amount of stock it may hold, have put it under a handicap in acquiring stock in good producing companies.

The amount of authorized capital in the new corporation has given rise to talk that a stock dividend might be declared. Should the exchange be share for share the holding company would have authorized but unissued $85,500,000 par value of capital stock. This would permit up to a 50 per cent dividend. The Texas Co.'s capital is $164,500,000. However, the statement of Mr. Beaty that the dividend rate of the new corporation would correspond to that of the present company implies that a share for share exchange might be made. A share for share exchange also would put the new corporation in position to acquire other properties on a stock exchange basis without having to revise its charter.

CLEVELAND, O.—Ohio Oil Co. has leased a large block of acreage around Atlanta, Macon county, Mo., and will soon begin drilling a test well. This is about 60 miles west of Quincy, Ill.

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended Aug. 27 (By Telegraph)

	Kansas		Oklahoma		North & Cent. Texas		North La.-Ark.		Total Week Ended Aug. 27		Total Week Ended July 30
Plants Reporting	23		46		41		14		124		124
Da. Cap. (Bbls.)	98,200		165,900		144,300		53,700		462,100		460,100
Da. Av. Crude Runs	59,446	—13.7	108,208	+ 2.3	64,355	— 1.9	65,563	+21.8	297,572	+ 1.2	273,666
Da. Av. Other Oils	7,145	+125.0	1,310	.....	5,799	+356.2	629	+591.2	12,263	—33.7	18,697
GASOLINE—Gallons											
Stocks, Aug. 20	7,760,957		22,691,027		13,065,880		2,889,681		46,407,545		53,416,711
Prod. 8-20-8-27	9,187,511	— 8.7	15,991,708	+ 4.1	7,670,515	+ 3.8	4,554,112	+49.1	37,403,846	+ 4.3	36,416,711
Ship. 8-20-8-27	8,399,809	—13.5	17,628,633	+15.3	7,705,730	+ 6.7	4,240,017	+25.4	37,974,189	+ 6.7	40,356,064
Stocks, Aug. 27	8,548,659	+10.1	21,054,102	— 7.2	13,030,665	— .3	3,203,776	+110.9	45,837,202	— 1.3	49,477,527
Ratio Sales to Prod.	91.4%		110.2%		100.3%		93.1%		101.5%		110.8%
KEROSENE—Gallons											
Stocks, Aug. 20	1,820,465		3,593,641		1,930,543		504,260		7,848,909		11,774,918
Prod. 8-20-8-27	1,546,472	— 6.7	2,695,460	+27.4	1,199,068	— 0.2	91,173	+89.9	6,352,173	+16.5	4,777,601
Ship. 8-20-8-27	1,140,005	—23.4	3,177,934	+15.1	1,600,456	+ 8.8	571,931	+34.5	6,490,326	+ 5.6	6,473,000
Stocks, Aug. 27	2,226,932	+22.3	3,111,167	—13.5	1,529,155	—20.8	843,502	+67.2	7,710,756	— 1.6	10,046,519
Ratio Sales to Prod.	73.7%		117.8%		133.4%		62.7%		102.1%		135.5%
GAS OIL—Gallons											
Stocks, Aug. 20	8,746,347		33,109,086		8,703,303		2,838,102		53,396,838		55,370,431
Prod. 8-20-8-27	1,903,922	— 2.3	405,881	.....	344,017	—78.9	2,599,176	+20.9	5,252,996	+ 4.9	5,174,769
Ship. 8-20-8-27	1,197,958	—50.9	1,769,440	+138.1	7,334	—91.6	2,702,182	+62.9	5,676,914	+ 8.9	3,553,145
Stocks, Aug. 27	9,452,311	+ 8.1	31,745,527	— 4.2	9,029,986	+ 3.8	2,735,096	— 3.7	52,972,920	— 1.8	56,992,055
Ratio Sales to Prod.	62.9%		435.9%		2.1%		103.9%		108.0%		68.7%
FUEL OIL—Gallons											
Stocks, Aug. 20	8,894,667		64,623,493		18,704,397		7,705,063		99,827,620		94,646,983
Prod. 8-20-8-27	5,388,473	— 7.8	7,719,160	—15.4	839,175	+ 5.7	11,085,519	+19.9	32,586,327	+ 1.4	29,662,370
Ship. 8-20-8-27	4,036,488	—34.3	5,741,835	—43.0	8,089,564	+ 9.1	9,923,488	—11.6	27,791,375	—20.3	27,871,501
Stocks, Aug. 27	10,146,652	+15.3	66,600,818	+ 3.1	19,008,008	+ 1.6	8,867,094	+15.1	104,622,572	+ 4.8	96,437,852
Ratio Sales to Prod.	7.49%		7.43%		96.3%		82.7%		85.2%		94.0%

+ or — columns are % change over previous week.

Gasoline Produced by Various Methods, Week Ended Aug. 27

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Arkansas	% of Total	TOTAL	% of Total
Straight run	6,352,912	69.2	10,514,083	65.7	6,181,087	80.6	2,058,072	45.2	25,106,154	67.1
Cracked	2,474,659	26.9	4,127,829	25.8	1,284,972	16.8	2,138,662	46.9	10,026,122	26.8
Natural	359,940	3.9	1,349,796	8.5	204,456	2.6	357,378	7.9	2,271,570	6.1
	9,187,511		15,991,708		7,670,515		4,554,112		37,403,846	

Gasoline Stocks are Lowest in Two Years

Staff Special—By Telegraph

TULSA, Aug. 31.

EXCEPTING fuel oil, stocks of all principal commodities at 124 Mid-Continent refineries were reduced during the week ended Aug. 27, according to reports gathered by National Petroleum News. Stove distillate stocks were reduced for the first time in several weeks as jobbers began ordering out a greater supply to care for their fall trade.

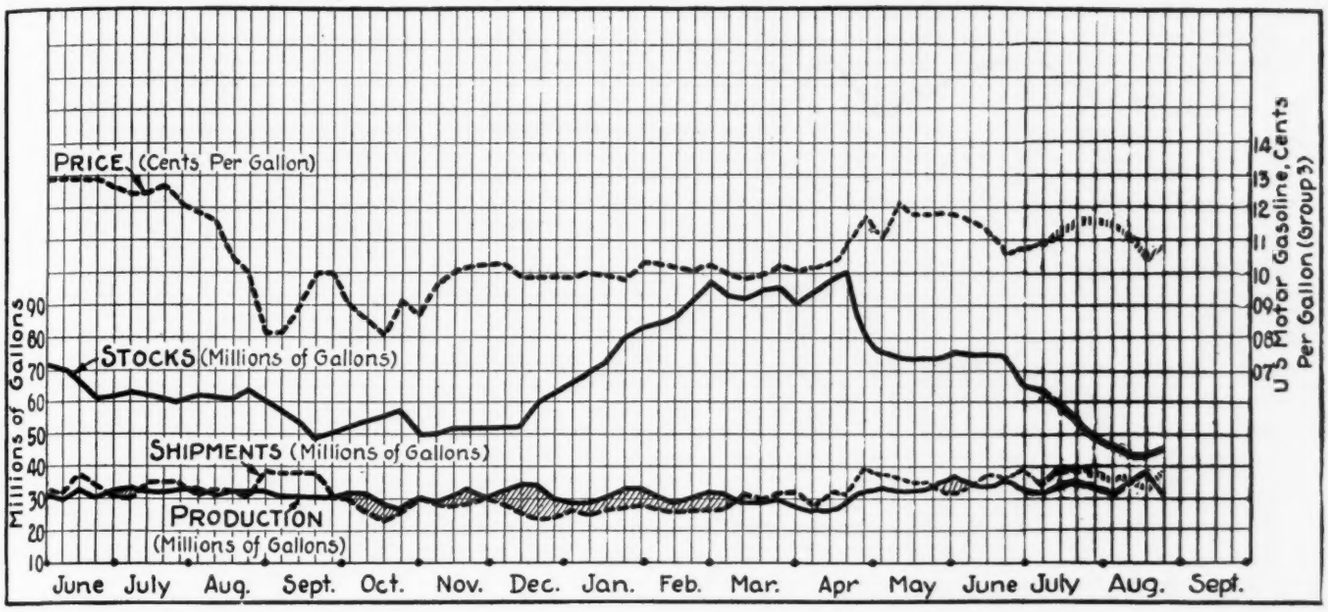
Shipments of gasoline increased more than 2,000,000 gallons, reaching a total of 37,974,189 gallons. The increase was recorded largely by refiners in Oklahoma, north Louisiana and Arkansas. North Texas refiners reported a moderate increase in shipments and Kansas refiners reported a slight decrease.

Production of gasoline was increased 1,600,000 gallons to 37,403,846 gallons. The increase in production was thus not quite enough to care for the increase in business and stocks were reduced around 600,000 gallons to 45,837,202 gallons. This is the lowest volume of gasoline stocks in the Mid-Continent in the last two years, being 3,000,000 gallons below the low point of 1925 reached on Sept. 18 when stocks at virtually the same group of plants totaled 48,736,859 gallons. At the rate of shipments maintained during the last week stocks at the

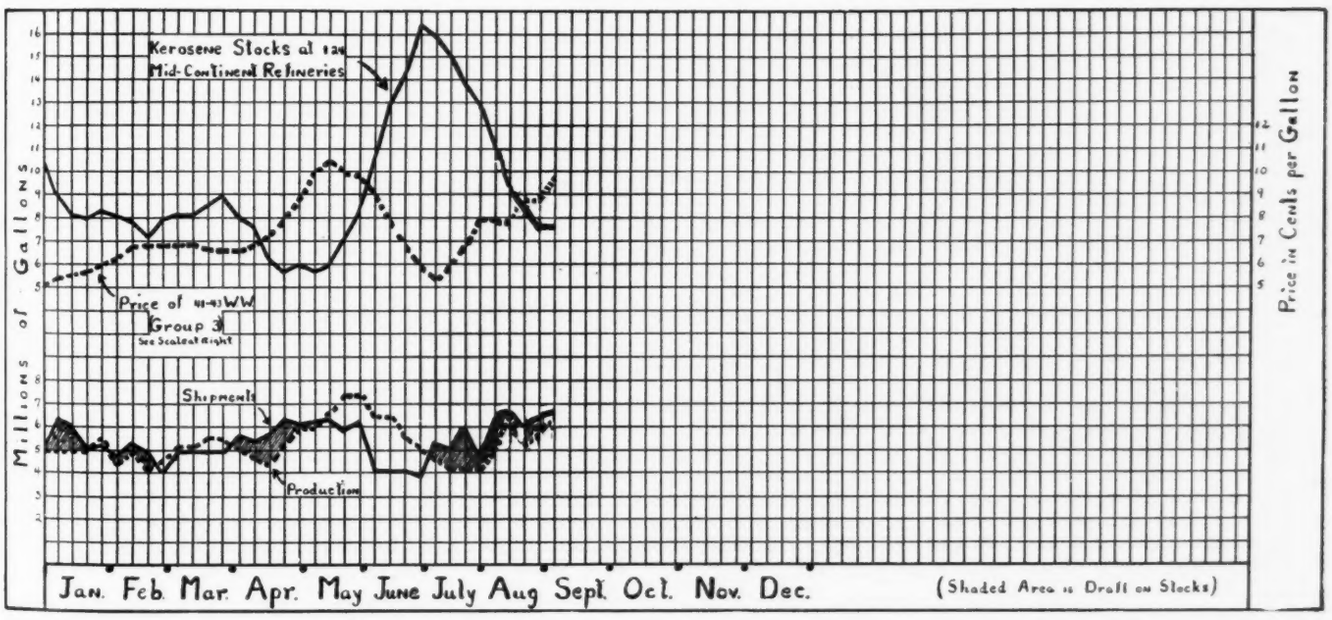
Barometer of Mid-Continent Refinery Market—Week Ending Aug. 27

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

GASOLINE


PRICE (Cents Per Gallon)
STOCKS (Millions of Gallons)
SHIPMENTS (Millions of Gallons)
PRODUCTION (Millions of Gallons)
Millions of Gallons
U.S. Motor Gasoline, Cents Per Gallon (Group 3)
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr May June July Aug. Sept.

KEROSENE


Kerosene Stocks at Mid-Continent Refineries
Price of 41-43 WW Group 3
Shipments
Production
Millions of Gallons
Price in Cents per Gallon
Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec.
(Shaded Area is Draft on Stocks)

124 plants represented only 8.4 days' supply.

Crude charges were increased 4000 barrels daily average at all plants to 297,572 barrels a day while charges of partly refined oils were increased 7000 barrels daily average to an average of 12,263 barrels.

Shipments of kerosene increased 350,000 gallons to 6,490,326 gallons and production was advanced 900,000 gallons in deference to the present keen demand. Total production was 6,352,173 gallons which was still 140,000 gallons behind shipments, causing stocks to be reduced to 7,710,756 gallons.

Shipments of stove distillate increased 600,000 gallons to 1,723,819 gallons but refiners reduced their production to obtain a larger yield of kerosene, bringing total production down to 1,156,804 gallons. Gas oil stocks were reduced 400,000 gallons to 52,972,920 gallons.

Summary for the Month

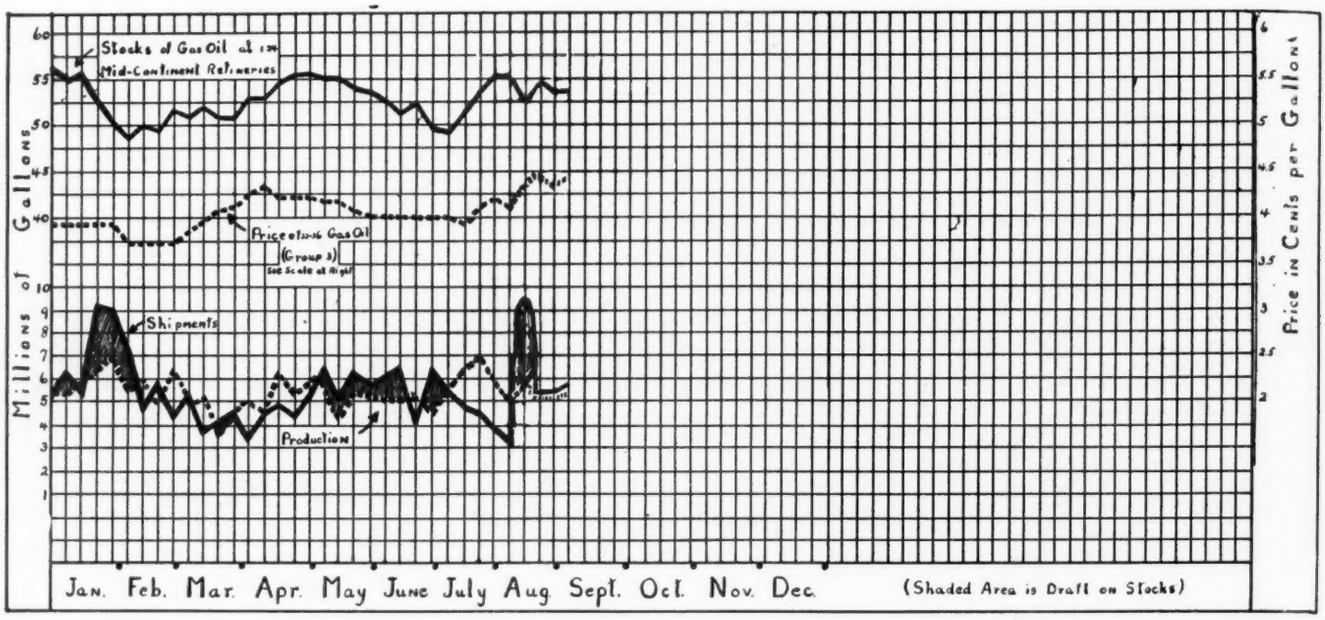
Production and shipments, all reporting refineries for four weeks ended Aug. 27. Change in stocks figured from July 30.

	Gallons
Gasoline	
Production	142,570,664
Shipments	146,210,989
Net change in stocks	—3,640,325
Ratio sales to production	102.5%
Kerosene	
Production	23,347,875
Shipments	25,703,638
Net change in stocks	—2,355,763
Ratio sales to production	110.1%
Stove Distillate	
Production	5,663,749
Shipments	4,713,620
Net change in stocks	+950,129
Ratio sales to production	83.2%
Gas Oil	
Production	20,706,083
Shipments	24,725,224
Net change in stocks	—4,019,141
Ratio sales to production	119.4%
Fuel Oil	
Production	126,305,995
Shipments	118,121,275
Net change in stocks	+8,184,720
Ratio sales to production	93.5%

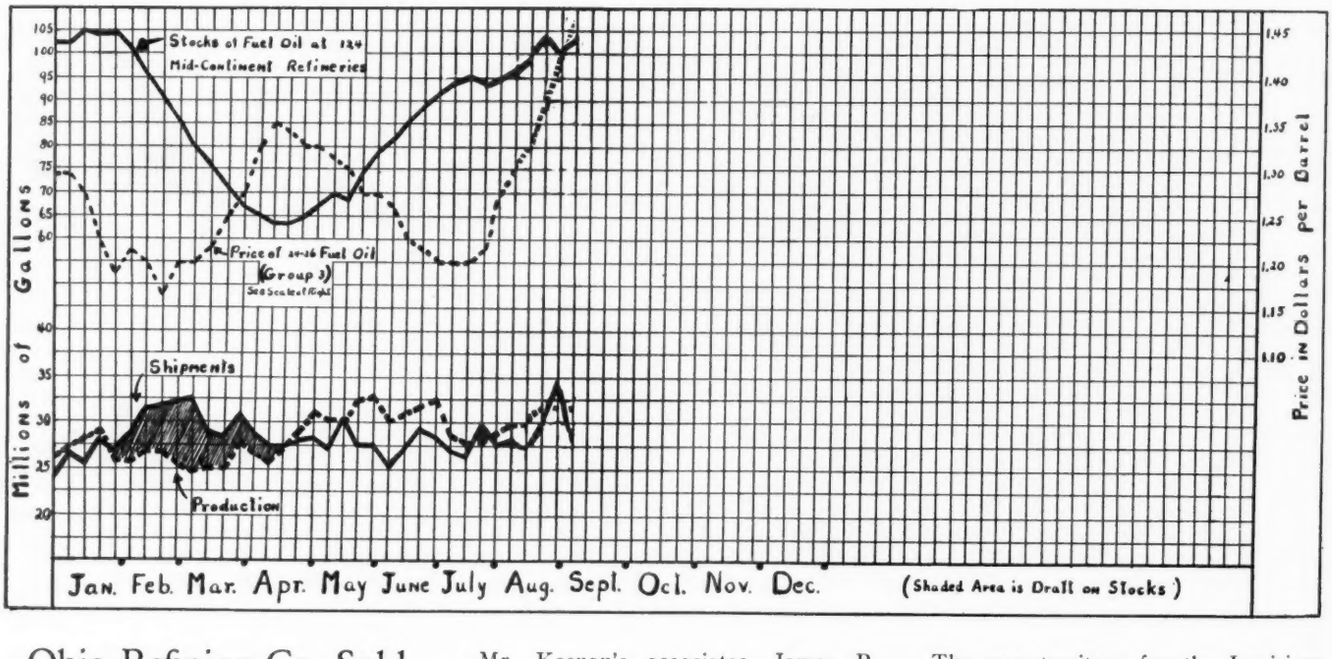
Barometer of Mid-Continent Refinery Market—Week Ending Aug. 27.

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

GAS OIL


Stocks of Gas Oil at 124 Mid-Continent Refineries
Price of 27-36 Gas Oil (Group 3)
See Scale at Right
Shipments
Production
Millions of Gallons
Price in Cents per Gallon
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
(Shaded Area is Draft on Stocks)

FUEL OIL


Stocks of Fuel Oil at 124 Mid-Continent Refineries
Price of 27-36 Fuel Oil (Group 3)
See Scale at Right
Shipments
Production
Millions of Gallons
Price in Dollars per Barrel
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
(Shaded Area is Draft on Stocks)

Ohio Refining Co. Sold to Louisiana Rfg.

CINCINNATI, Aug. 27.—Negotiations were concluded August 12 for the transfer of the entire holdings in the Ohio Refining Co., Cincinnati, to the Louisiana Oil Refining Corp., Shreveport, La. for a consideration over $500,000. This includes the main plant in Bond Hill, Cincinnati, also producing properties in Western Kentucky.

Walter J. Keenan, president and general manager of the Ohio Refining, has also disposed of his entire chain of privately-owned filling stations to the Louisana Company.

Mr. Keenan's associates, James R. Duffin, R. V. Board and W. E. Massey, all of Louisville, have also disposed of their holdings in the Ohio company to the Louisana Co.

The Ohio Refining Co. was organized by Mr. Keenan five years ago following his retirement from the Moore Oil Refining Co., Cincinnati. The company has some 10 acres of refinery grounds in Bond Hill, consisting of tankage amounting to over 1,250,000 gallons, four shell, and tube stills. 18 tank trucks, a number of filling stations and bulk stations at Wilmington, Dayton, Georgetown and Hamilton. In addition the Ohio Co. enjoys a large fuel oil business in Cincinnati and vicinity.

The new territory for the Louisiana Oil Refining Corp. will be operated as the Ohio division, with T. H. Payne, formerly of the Beacon Oil Co., an affiliated concern, as manager.

NASHVILLE, TENN.—A new spraying machine, and an Alemite pressure gun have been added to the equipment of the Thomas Auto Service Station here.

The station, which is located in a suburb on a main highway, has increased its business 80 per cent over last year, according to W. C. Thomas, owner.

Drive-in space at the station covers 500 feet and the station is equipped with six pumps.

Wildcat Gasser Stirs Up Interest In Southern Arkansas

Staff Special

EL DORADO, ARK., Aug. 28

THERE'S considerable speculation down here nowadays over the possibilities of another oil field being on the verge of discovery since the Simmons No. 1, put down by the Simms Oil Co. in 9-18-13 blew in unexpectedly Sunday morning, Aug. 22, making considerable gas and salt water.

The wildcat gasser is approximately 12 miles southeast of El Dorado, and is east of the East field. It is a half a mile northeast of the little town of Urbana. The test was spudded in July 16, and was down to 2656 feet when gas was encountered. The crew was pulling the drill stem, after having gone approximately 12 feet into the sand, when the well began blowing off. The pressure forced out 350 feet of drill stem and completely wrecked the derrick.

W. E. Skinner, assistant superintendent, estimated that the well was making around 40,000,000 cubic feet of gas and about 10,000 barrels of salt water. The crew succeeded in capping the well late Tuesday afternoon and immediately began erecting another derrick preparatory to running a string of casing.

Much of the speculation has taken on a financial form. Several lease sales as high as $500 an acre have been recorded, and when the writer visited the scene Thursday afternoon at least three rigs were enroute to the site.

The little village of Urbana is undergoing its first growing pains as a result of the well. The village consists of two stores, a postoffice and a railroad water tank, but this afternoon a party of surveyors were busy staking out a townsite.

The well is being closely watched primarily because it has behaved in practically the same way as discovery wells in other fields in south Arkansas. It will be remembered that the original discovery well was a gasser, as well as the discovery well in the Smackover field.

Foliage within a radius of half a mile of the well is covered with sand and salt. A small creek near the well was flooded with the salt water and thousands of fish killed.

Should a new field be opened up as a result of the Simmons No. 1 blowing in, indications are that the trend will be north and east, oil men here say. It is pointed out that the original test well in Union county, the Penn-Wyoming test which proved to be a dry hole, is a mile and a half southwest of the Simmons well. The Warbler test in 6-18-13 would indicate no oil possibilities west, while the Teter et al test in the northwest of the northwest of 33-17-13 would indicate no oil sands are in that direction.

(Picture of this well shown on front cover of this issue.)

Canyons to Be Used For Oil Tanks

Staff Special—By Telegraph

HOUSTON, Aug. 31.—Concrete-lined canyons with tops covered over have been approved by the Railroad Commission of Texas as temporary storage for Panhandle district crude.

The first permit for storage of this type was issued late Monday by the commission, which administers the Texas conservation law, in favor of Heywood and Phillips who will wall up a canyon in Sec. 14, in the heart of Hutchinson county development. Besides lining the container with cement and covering over the top, the commission ruled that six inches of water must be placed in the bottom of the tank as a cushion for the oil. The tank is to be covered with lumber and tar paper and a steam line is to be run under the cover ready for use against fire at all times.

Use of this type of storage will relieve much of the congestion of the present in the Panhandle producing area and promises to be extended on the part of individual producers with no other outlet for their crude.

Tide Water Appoints New General Manager

Arthur W. Sullivan

NEW YORK, Aug. 30.—Arthur W. Sullivan, who was formerly sales development and advertising manager of both the Tide Water Oil Co. and the Tide Water Oil Sales Corp., has been appointed general manager of the latter company.

Mr. Sullivan has had long experience in the oil business and has specialized in sales and advertising work. Previous to his connection with the Tide Water company on Jan. 1, Mr. Sullivan was for seven years vice president in charge of Tide Water advertising with the advertising agency of Joseph Richards Co., Inc., and for six years prior to that, was advertising manager of the Vacuum Oil Co.

William C. Gittinger, who was formerly Mr. Sullivan's assistant, succeeded the latter as sales development and advertising manager.

CLEVELAND, O.—T. F. Bray, president of Southern States Oil Corp., which is now drilling a deep test in Jefferson county, Fla., has recently returned to Monticello, Fla., from a business trip north. The well is now below 1,500 feet, drilling in lime and shale.

Los Angeles Water Shipments, Week Ended Aug. 28

(Barrels of 42 U.S. Gallons)

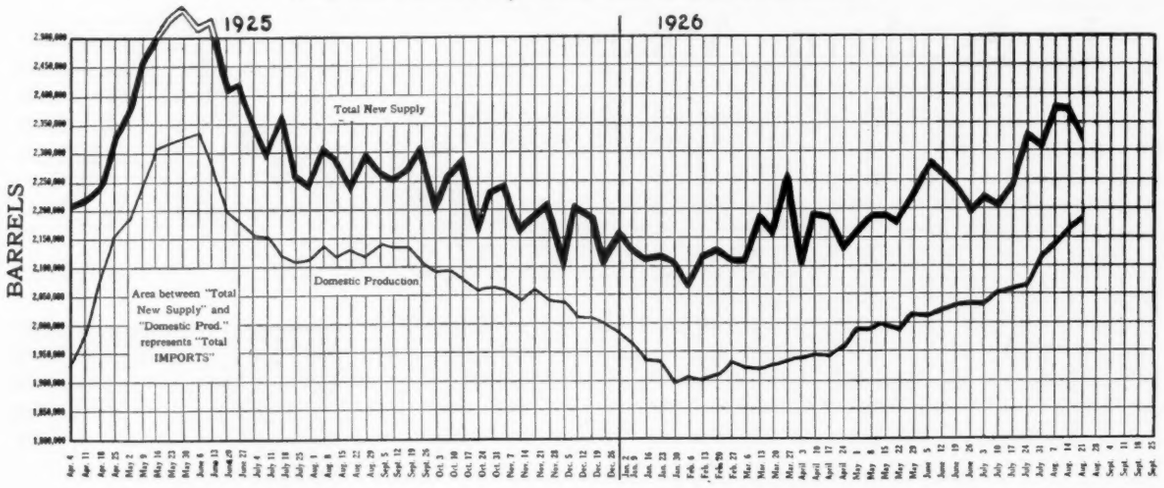
	Crude	Gasoline	Kerosene	Fuel Oil	Gas Oil	All Products
Atlantic Domestic	79,500	154,860	.....	243,782	229,829	707,971
Atlantic Foreign	114,453	.....	.....	309,661	.....	424,114
Pacific Domestic	397,598	176,383	.....	191,692	.....	765,673
Pacific Foreign	.....	.....	57,359	258,494	.....	315,853
Total shipments for week ended August 28 (34 tankers)						2,213,611
Total shipments for week ended August 21 (37 tankers)						2,326,013
Total shipments for week ended August 14 (36 tankers)						2,289,376

Ships Clearing for Atlantic Seaboard

Tanker	Destination	Consignee	Barrels
Lio	Baltimore	General Petroleum Corp.	80,822 Gasoline
Shreveport	New York	Cities Service Rfg. Co.	79,500 Crude
R. W. Stewart	Philadelphia	Pan American Petroleum	88,782 Fuel
Hagood	New York	Cities Service Refining Co.	77,944 Gas Oil
Geo. W. Barnes	Baltimore	Pan American Petroleum Co.	74,038 Gasoline
S. M. Spaulding	New York	Pan American Petroleum Co.	76,000 Gas Oil
Elisha Walker	New York	Pan American Petroleum Co.	75,885 Gas Oil
W. M. Burton	Philadelphia	Atlantic Refining Co.	75,000 Fuel
Dean Emery	New York	Pan American Petroleum Co.	80,000 Fuel

Daily Average Crude Oil Production and Imports

(This chart is one week older than figures given below)



Daily average gross crude output of United States, by fields, for week ending with dates given below, as compiled by American Petroleum Institute.

Production Summary

(Daily average figures for week ending Aug. 28, in barrels, as compiled by American Petroleum Institute).

	Aug. 28	Aug. 21
East of Rockies	1,572,750	1,564,400
Increase		8,350
Total U. S.	2,176,850	2,170,500
Increase		6,350
Crude Oil Imports	175,286	160,857
Increase		14,429
Total Crude Supply	2,352,136	2,331,357
Increase		20,779

OKLAHOMA

	Aug. 28	Aug. 21
North Braman	12,300	12,300
South Braman	8,650	8,800
Blackwell	4,250	4,200
Hubbard	2,500	2,550
Thomas	2,400	2,400
Tonkawa	37,250	35,750
Garber	33,400	32,350
Burbank	49,200	49,300
Osage, outside Burbank	34,200	34,100
Watchorn	2,800	2,850
Cushing	21,600	21,650
Yale Jennings	13,250	13,500
Davenport	6,900	7,200
Bristow-Slick	28,000	28,050
North Okmulgee	17,300	17,300
Lyons-Deaner	3,950	4,000
Stroud	2,050	2,050
Cromwell	16,200	16,450
Papoose	10,150	9,650
Wewoka	31,350	32,050
Duncan district	7,450	7,450
Graham	9,950	10,150
Fox	5,800	5,850
Healdton	14,900	14,800
Hewitt	11,900	11,450
Seminole	13,900	14,700
Others	67,100	67,000
Total Oklahoma	468,300	467,900
Increase		400

KANSAS

	Aug. 28	Aug. 21
Florence-Covert	2,000	2,000
Peabody-Elbing	4,100	4,100
Eldorado-Towanda	13,850	13,850
Augusta-Fox-Bush	4,850	4,850
Rainbow Bend	4,050	3,950
Russell	5,200	5,200
Greenwood County	45,100	45,600
Others	33,100	33,100
Total Kansas	112,250	112,650
Decrease		400

NORTH LOUISIANA

	Aug. 28	Aug. 21
Homer	5,550	5,500
Haynesville	9,500	9,500
Caddo, light	10,000	10,250
Caddo, heavy	2,850	2,650
De Soto, Red River	4,200	4,100
Elm Grove	550	550
Bellevue	2,000	2,100
Cotton Valley	7,950	7,950
Urania	14,300	14,250
Total North Louisiana	56,900	56,850
Increase		50

ARKANSAS

	Aug. 28	Aug. 21
El Dorado	7,000	7,050
Smackover, light	14,950	14,800
Smackover, heavy	121,150	122,000
Stephens	1,850	1,850
Nevada	2,000	2,000
Lisbon	8,850	9,000
Total Arkansas	155,800	156,700
Decrease		900

NORTH TEXAS

Burkburnett	11,350	11,550
Electra	16,200	16,200
Iowa Park and K-M-A	4,400	4,400
Wilbarger	14,200	14,450
Hutchinson County	105,950	97,600
Panhandle	7,650	9,000
Petrolia	500	550
Archer County	30,900	31,600
Others	4,600	4,550
Total North Texas	195,750	189,900
Increase		5,850

EAST CENTRAL TEXAS

Mexia	11,950	12,200
Currie	800	800
Richland	1,500	1,550
Corsicana-Powell	26,950	27,350
Wortham	7,000	7,200
Nigger Creek	14,800	12,850
Total East Central Texas	63,000	61,950
Increase		1,050

WEST CENTRAL TEXAS

Stephens County	11,250	11,150
Eastland County	5,750	5,750
Desdemona	1,750	1,750
Young County	6,450	6,600
Palo Pinto County	450	450
Callahan County	4,200	4,350
Shackleford County	8,750	9,700
Brown County	9,850	10,450
Reagan County	28,250	28,900
Crane and Upton Counties	6,850	5,450
Others	8,250	7,250
Total West Central Texas	91,800	91,800

SOUTHWEST TEXAS

	Aug. 28	Aug. 21
Luling	21,800	21,600
Laredo district	17,600	17,400
Somerset	2,000	2,000
Lytton Springs	4,100	4,200
Piedras Pintas	150	150
Others	500	500
Total Southwest Texas	46,150	45,850
Increase		300

GULF COAST

Goose Creek	10,350	10,650
Hull	14,800	15,250
Saratoga	1,350	1,350
Blue Ridge	1,300	1,300
Damon Mound	850	850
Batson	1,350	1,350
West Columbia	9,050	9,250
Humble	4,000	4,000
Pierce Junction	2,200	2,900
Sour Lake	5,200	5,250
Spindletop	81,550	75,700
Orange County	7,750	7,800
Edgerly	1,000	1,000
Evangeline	1,100	1,150
Vinton	6,350	6,450
Lockport	4,050	4,150
South Liberty	4,850	4,900
Big Creek	2,000	2,000
Boling	1,750	2,100
Others	2,700	1,800
Total Gulf Coast	163,550	159,200
Increase		4,350

ROCKY MOUNTAIN

Wyoming

	Aug. 28	Aug. 21
Salt Creek	43,400	48,700
Grass Creek	3,100	3,000
Elk Basin	800	900
Big Muddy	3,300	3,200
Lost Soldier	5,400	5,250
Rock River	2,600	2,700
Teapot Dome	1,050	1,300
Others	4,900	5,100
Total Wyoming	69,550	70,150
Decrease		600

Montana

Cat Creek	2,550	2,750
Sunburst	25,000	25,000
Others	200	200
Total Montana	27,750	27,950
Decrease		200

Colorado

Moffat (Craig)	3,150	3,200
Fort Collins	3,850	4,000
Florence	500	500
Others	1,000	1,150
Total Colorado	8,500	8,850
Decrease		350

New Mexico

Artesia	3,000	3,000
Hogback	700	700
Rattlesnake	750	1,450
Total New Mexico	4,450	5,150
Decrease		600
Total Rocky Mountain	110,250	112,100
Decrease		1,850

CALIFORNIA

	Aug. 28	Aug. 21
Santa Fe Springs	48,000	49,000
Long Beach	99,000	102,000
Huntington Beach	45,500	45,500
Torrance	28,000	28,500
Dominguez	21,500	21,500
Rosecrans	14,000	15,000
Inglewood	45,000	45,000
Midway-Sunset	94,500	94,500
Ventura Avenue	48,600	45,100
Others	160,000	160,000
Total California	604,100	606,100
Decrease		2,000

EASTERN

	Aug. 28	Aug. 21
(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	109,000	109,500
Decrease		500

Real Drilling Campaign Now Being Waged in Seminole District

By A. F. Hinton
N. P. N. Staff Writer

TULSA, Aug. 28

OKLAHOMA production held practically unchanged during the past week recording an increase of only 390 barrels over the week before and averaging 468,140 barrels daily, according to National Petroleum News estimate. Small gains were recorded by Garber and Papoose, while Tonkawa jumped its output about 1400 barrels. All other active fields in the state declined during the week, but in most cases the decline was small.

From a news standpoint, Oklahoma has been equally as quiet, as the week passed with no outstanding developments, either in the way of wildcat discoveries or of remarkable wells in fields already under process of development. The Seminole district continues to be the hottest spot in the state and still bids fair to become one of the big fields on the south end. At present, there is a lull in news of new developments there, as a large number of wells that started up after completion of the Independent-Garland big producer in 26-9-6 are now progressing toward pay depths, but have not had time to get far enough down to make real news.

There are 27 wells drilling in Sec. 26 alone, in addition to a large number of locations on which no work has been started. In Sec. 24, where the Indian Territory Illuminating Oil Co. drilled in the fields discovery well some months ago, there are now 13 producing wells, 17 drilling and nine locations. In Sec. 23, which may prove to be the connecting link between the I.T.I.O. and Independent pools, there is one producing well, six drilling and four locations. The one well in this section is the Amerada Petroleum Corp. No. 1 Rentie, in the southeast corner southwest northeast, which has been drilled to total depth of 4026 feet and is making about 315 barrels daily. Other wells are being drilled in Secs. 22, 27, 25, 34 and 35.

New High Marks Reached By Two Fields

Staff Special—By Telegraph

HOUSTON, Aug. 30.—Spindletop deep flank production and Nigger Creek yields in Limestone county had both reached new peak production records over Sunday. Spindletop daily production was 87,000 barrels brought about by three flush completions which, however, did not extend field lines or assume greater significance than their importance as individual big wells. Nigger Creek's 20,180 barrels daily came from 27 wells indicating steady decline in per well per day production without extension of field lines. Nigger Creek's productive area is indicated to be less than 175 acres.

The three new wells at Spindletop are Yount-Lee Oil Co.'s No. 9 McFaddin 5500 barrels; Gulf Production Co.'s No. 3 Davis, 9000 and its No. 2 Week, 3500 barrels. Completions due this week may take Spindletop above 100,000 barrels daily but the field's peak is near at hand with the time nearing when all acreage controlled by others than the Yount-Lee company will be drilled up. When a total of about 20 acres has been fully drilled up, the Yount-Lee interests will be in control of all acreage possible to produce on all sides of the Spindletop salt dome.

Drilling Operations in Oklahoma, Kansas and North Texas

	Aug. 28, 1926 — Week Ending — Aug. 21th, 1926									
OKLAHOMA	**Loc.**	**Rigs**	**Drg.**	**S.D.**	**Total**	**Loc.**	**Rigs**	**Drg.**	**S.D.**	**Total**
Burbank	7	8	22	1	36	10	5	30	..	45
Other Osage	17	10	51	7	85	13	13	52	11	89
Bristow-Cushing	21	30	143	13	207	14	34	144	35	227
North Oklahoma	17	19	148	77	261	9	20	160	82	271
South Oklahoma	25	27	173	44	269	19	33	176	44	262
Muskogee	..	13	61	13	87	..	16	57	17	90
Okmulgee-Bristow	7	50	137	21	215	7	47	148	26	228
Tonkawa	2	..	24	1	27	2	1	23	1	27
Wewoka-Cromwell	15	16	206	24	261	18	22	195	22	257
Total Oklahoma	111	173	965	201	1450	92	191	985	2?8	1506
KANSAS	62	68	243	97	470	64	62	241	99	466
NORTH TEXAS										
Eastland County	..	3	96	11	110	..	8	80	5	93
Stephens County	..	6	21	18	45	..	6	22	14	42
Texas Panhandle	..	190	374	58	622	..	179	393	43	615
Mexia District	..	13	32	21	66	..	10	43	19	72
E. Tex. Wildcats	..	8	8	16	32	..	6	6	14	26
W. Texas Wildcats	..	152	355	93	600	..	162	368	95	625
Wichita Falls	..	108	169	33	310	..	100	161	33	294
Total N. Texas	..	480	1055	250	1785	..	471	1073	223	1767
GRAND TOTAL	173	721	2263	548	3704	156	724	2299	560	3739

Completions in North Louisiana and Arkansas, Week Ending Aug. 26

LOUISIANA

Urania

Company	Well	Location	Depth	Yield
Arizola Petro. Co.	Tannehill No. 9	36-10-1E	1532	15
La. Oil Refg. Corpn.	Tremont B-14	25-10-1E	1524	125
La. Oil Refg. Corpn.	Tremont C-1	35-10-1E	1514	30
Geary and Bristol	Urania No. 3	2-10-2E	1521	100
La. Oil Refg. Corpn.	Tremont C-2	2-9-1E	1503	30
Geo. W. Weatherbee	Urania A-4	2-9-1E	1503	150

Bossier Parish

Bliss et al	A-20	15-19-11	420	15

Caddo Parish—Caddo District

Dixie Oil Co.	Robertshaw No. 78	14-21-15	1640	12
Gulf Refg. Company	Levee Bd. A-6	9-20-16	2286	6
The Texas Company	Caddo M. L. Co. No. 48	26-21-15	1680	5
Gulf Refg. Company	W. M. Chatman No. 4	30-21-7	1397	41

Caddo Parish—Waskom District

Owl Oil Co.	Bryson No. 2	7-17-16	2512	15-mill cu-ft.gas

Ouachita Parish

Central Co., Inc.	Kerr No. 1	12-10-4E	2159	1-mill cu-ft.gas

ARKANSAS

Stephens

Company	Well	Location	Depth	Yield
La. Oil Refg. Co.	Culp No. 1	22-15-19	1515	12-mill cu-ft.gas

Smackover

J. D. Reynolds	Harwell No. 1	15-14-18	2262	Dry Abnd.
Hatfield et al	Ennis No. 3	23-17-26	2235	S. W. Abnd.
Houston Oil Co.	Hinton No. 2	5-16-15	2394	75
Humble Oil & Refg. Co.	G. H. Goodwin No. 1	20-17-16	2157	35
Imperial Oil Co.	McClanahan No. 10	6-16-15	2554	40
Imperial Oil Co.	Primm No. 3	21-17-16	2132	17
Lion Oil & Refg. Co.	Mitchell A-6	17-17-16	2100	½ mil cu-ft.gas
Lion Oil & Refg. Co.	Mitchell A-11	17-17-16	2165	15
Lion Oil & Refg. Co.	Mitchell B-5	17-17-16	2178	30
J. D. Reynolds	Dumas No. 5	15-17-16	2171	15
Ravenger Oil Corpn.	Dumas No. 7	9-17-16	2115	30
Ravenger Oil Corpn.	Snyder No. 1	22-17-16	2176	4
Simms Oil Co.	H. B. Murphy No. 4	15-16-15	2602	210
Magnolia Petroleum Co.	Werner Co. No. 2	1-16-17	2253	45
Nat. Gas & Fuel Corpn. and Atlantic Oil & Producing Co.	Taulor No. 1	23-18-17	3148	S. W. Abnd.
Arkansas Drilling Co.	Townes No. 1	34-19-11	2700	S. W. Abnd.
Gulf	Emma L. Primm No. 4	21-17-16	2153	25

Completions in Oklahoma and Kansas, Week Ending Aug. 28

OKLAHOMA

Carter County

Company	Well No.		Depth	Initial Prod.
Gilmer	2	SESWNE 34-1-3 W	3190–3228	140
Magnolia	6	NWc SE SW 34-1-3	2387–2920	200
Magnolia	7	SWc SE SW 34-1-3 W	2096–2756	240
Coline	8	SWc NW 8-2-2 W	2443–2448	8M
Mid-Cont	1	SWc SE 15-2-3	T. D. 3326	Dry
Humble	1	NW SW SE 1-4-4	T. D. 5090	Dry
Schermerhorn et al	1	NEc NW SE 3-5-1	T. D. 3506	Dry

Creek County

Markham et al	1	NWc 6-19-7	2770–2792	40
Bartlett-Mann	2	CWL SW NE 5-19-6	1963–1980	10
Burlengame et al	9	SEc SW NW 13-19-8	2352–2425	200
Texas	2	SW NW SW SE 13-19-8	2189–2225	95
Steinberger-Smith	2	CEL SE SE 19-19-8	2518–2526	5M
Magnolia	7	NEc NW 16 18-7	2642–2682 OWD	55
Freeman-Tiger	1	SEc NE NE 22-18-7	1632–1680	8
Gibson-Baker	1	NEc NW SW 17-17-7	1572–1581	2
Alvard-West	1	SEc SW SW 14-17-8	2277–2313	65
Interocean et al	5	CWL NE NE 27-17-8	3134–3148	200
Tibbens	1	SEc 22-15-8	2430–2475	30
Henry	4	NEc NW SE 2-14-8	2502–2538	45
Haskell	6	SEc SW NW 12-14-8	2433–2475	10
Holmes et al	1	C NE SW 16-19-10	1935–1940	10
Riverland	1	CEL W½ NW 1-18-11	2088–2092	576
Cole et al	1	SEc NE NW 22-18-11	2165–2170	5M
Wilcox	1	NWc NE NE 10-17-9	2034–2068	100

Creek County—cont.

Indep. et al	1	NWc NE NW 8-17-10	2998–3029	272
Mid-Cont	3	NE SE NW SW 24-17-10	1795–1845	25
Madden	1	SEc SW SW 30-18-10	T. D. 3230	Dry
Day	2	SWc NW NE 6-18-12	T. D. 2030	Dry
H. W. Skelly	1	NW SE SW 15-19-7	T. D. 3315	Dry
Magnolia	4	NWc SE SW 32-19-7	T. D. 3958	Dry
Dixie	1	NWc SW 12-18-7	T. D. 3670	Dry

Garfield County—Garber

Sinclair	58	SE NE NE 13-22-4	3688–3720	805
Roxana	1	SWc 18-22-3	3037–3042	64
Sinclair	50	NE SW NW 18-22-3	2690–2700	400
Sinclair	17	NW NE SW NE 19-22-3	1400–1408	35
Sinclair	13	NW SE NW NW 30-22-3	2098–2118	20
Roxana	4	SEc NE NW 13-22-4	T. D. 3842	Dry
Healdton	19	CEL NW NE 24-22-4	T. D. 3410 OWD	Dry
Sinclair	1	C NE SW 30-22-3	T. D. 5428 OWD	Dry

Grady County

Stogner et al	7	C SW NE 23-5-8 W	2056–2330	8M
Carter	1	SEc SW SW 5-3-5 W	2782–2793	55
Magnolia	1	SEc NW 34-3-5	1328–1345	20
Carter	1	SE SW NW 35-3-5	.....	65

Grant County

Kay	3	NWc SW SW 23-27-3 W	3960–4020 OWD	12M
West. States	1	NEc 27-27-3	4000–4057	50M
West. States	4	SWc NE SE 22-27-3	T. D. 1707	

Hughes County—Papoose

Minnehoma	3	SEc SW NE 1-9-9	T. D. 3406	Dry

Hughes County

Amarada	13	CEL W½ SE NW 5-7-8 E	4163–4185	230
Dixie	6	NEc NW NE 5-7-8	4183–4195	1300

Jefferson County

Peckham et al	1	NEc SW NE 8-5-8 W	T. D. 2000	Dry

Kay County—N. Braman

Mid-Cont	2	SEc SW 16-29-1 W	3480–3487	1903
Comar	5	NEc NW 21-29-1	3365–3379 OWD	6845

Kay County

Comar	1	NW SE SE SW 5-28-1 W	3400–3415	295
Davis	1	NEc 31-28-3 E	T. D. 3908	Dry
Tidal-Ostot	1	SWc NW 3-27-1 W	T. D. 3760	Dry
Prairie	4	SW NW NW 10-27-1 W	T. D. 3444 OWD	35
Ark. Fuel	2	NWc SW SW 3-27-1	2354–2357	285
Ostot et al	3	NWc SE NW 16-27-1 W	3440–3442	28M
Una Lee	1	NEc 18-27-1 W	3482–3488	16

Lincoln County

Mason	5	SWc SE NW 23-16-8 E	3114–3115	1200

Lincoln County—Davenport

Magnolia	1	NW NE SW 8-15-6	4065–4068	166
Mid-Cont	5	SWc NW 8-15-6	3817–3824	265
Phillips	4	SEc NW SW 8-15-6	4069–4075	290
Amerada	8	NWc SW 3-14-5	2659–2671	5
Magnolia	6	CEL SE NE 4-14-5	3452–3464	20
Magnolia	3	SWc NW SE 10-14-5	3435–3444	100
Southwestern	4	NWc SW NE 11-14-5	3360–3382	5
Magnolia	1	SWc SE SE 33-15-5	T. D. 4356	Dry
Magnolia	3	SEc NE SE 34-15-5	T. D. 3510	Dry

Marshall County

Gill et al	1	SEc NE SE 21-5-5 E	T. D. 350	Dry

Muskogee County

Culp et al	4	SWc NE SE 30-15-15 E	1539–1549	175

Noble County

Magnolia et al	3	SE NW SW 15-21-2 W	1876–1885	75
Sinclair	1	SEc NW SW 15-23-2 W	T. D. 4470	Dry
Red Bank	1	SEc SW SW 16-21-2	T. D. 5313	Dry

Nowata County

Prairie	15	NE NW NE SW 31-25-17 E	438–455	32

Okfuskee County

Gypsy	1	NE SE 35-11-9 E	3187–3196	60
Phillips	2	SW NE NE 10-12-11	T. D. 3384	Dry
Leard et al	1	NWc SW 8-11-11 E	T. D. 1360	Dry

Okmulgee County

Devonian	7	NE SW NE SE 24-16-12	2249–2257	25
Sidwell	1	SWc NW SW 4-14-11	2405–2412	60
Pine	1	NWc NE NE 36-14-12	1235–1335	2M
Slick	2	SEc NW SE 14-14-14	1686–1726	75 & 5M
Texas	1	NEc SW 34-16-14	T. D. 2350	Dry
Michelson	6	C SW SW 20-15-12	T. D. 1600	Dry
Kingwood	1	SWc NE SW 11-14-12	T. D. 2809	Dry
Gibson et al	1	SEc SW SW SE 14-13-11	T. D. 2560 OWD	Dry
Parker	1	NWc NE SE 36-13-12	T. D. 1262	Dry
Custer	4	NEc SESE 19-15-14	T. D. 2347 OWD	Dry
Turner et al	1	SWc NW 5- 14-13	T. D. 2791	Dry
Sheldon	1	NWc SW NE 3-13-13	T. D. 2745	Dry

Osage County—Burbank

Company	Well No.		Depth	Initial Prod.
Phillips	8	NE SE SW 1-27-5 E	2930–2991	2730
Phillips	10	SE NW SW 1-27-5	2998–3033	700
Skelly	4	SW SE NW 2-27-5	2935–2974	150
Mid-Kansas	1	NE SW 35-27-5	2992–3037	100
Phillips	7	NW SE SE 7-27-6 E	2935–2992	400
Phillips	13	NWc SE 7-27-6	2952–2985	1450
Lewis	7	SWc SE 21-26-6 E	2886–2934	400
Phillips	10	SE NW SW 21-26-6	2932–2979	335
Prairie	10	SEc NW SE 21-25-6	2686–3736	15
Prairie	10	SWc NE SE 21-25-6	2677–2706	50

Osage County

Prairie	1	SEc NE SE 36-24-11	T. D. 1885	Dry
Winona	4	CWL E½ W½ SW 21-29-9	1581–1606	10
Margay	8	CNL NE 21-22-9	2522–2552	40
Kewanee	5	SWc SW NE 4-22-11	1666–1699	50
Kewanee	6	SEc SW NE 4-22-11	1644–1685	35
Kewanee	15	CSL N½ S½ NE 5-22-11	1130–1174	20
Barnsdall	18	NE SE SE 30-21-12	1873–1940	60
Flliott-Smith	25	NEc NW NW 30-21-12	2080–2104	2
S. S. Home	5	NWc NE 5-20-11	1720–1734	40
Laurel	1	SWc NE 27-28-6	T. D. 3010	Dry
Osage Gas	3	SWc SE SE 7-27-11	T. D. 787	Dry
Devonian	16	NE NW SW 34-25-11	T. D. 1836	Dry
Gypsy	1	SEc NW 11-21-7	T. D. 3390	Dry
Lawrence	2	NE SE NE NE 2- 21-11	T. D. 2320	Dry

Pawnee County

Marland et al	1	NWc SE 33-20-5 E	3674–3730	16
Baker	1	SEc NE 3-20-6 E	2982–3010	9M
Mid-Cont	21	NW NE SW 16-20-7	2573–2592	70
G. Smith	1	NEc NW 27-20-7	2650–2681	15
Minnehoma et al	2	CNL SE NW 7-20-8	2318–2333	40
Selby	7	NEc SW SE 23-20-8	3150–3152	10
Champlin	1	C SW SW 19-20-6	T. D. 3842	Dry

Payne County

Mid-Cont	1	SEc SW SE 14-19-4	T. D. 3739	Dry
P &R	2	SEc SW 7-18-5	T. D. 3041	Dry
Magnolia	4	SWc NW SE 8- 19-5	3019–3033	110

Payne County—Mehan

Empire	1	NWc SW NW 26-18-3	4360–4362	435
T. C. M. O.	4	SWc NE NW 25-18-3	4218–4286	980

Rogers County

Hadley-Mitchell	1	NEc SW SW 30-20-17	T. D. 550	Dry
Hadley-Mitchell	2	SWc 3- 20-17	T. D. 639	Dry

Seminole County

Sinclair	10	NEc 4-10-8 E	1868–1880	10
Ramsey	5	SEc NW SE 31-8-8	3216–3240 OWD	25
Transcontinental	1	SWc SE 10-11-8	T. D. 3945	Dry
Gardner	1	SWc 30-8-8	T. D. 3452	Dry
Buttram et al	1	NEc NW 6-7-8	T. D. 3305	Dry
Magnolia	3	NEc 6-7-8	T. D. 3468 OWD	Dry

Stephens County

Winkler et al	2	SEc SW SW NE 28-1-8 W	T. D. 2425	Dry
Hawkes-Ware	2	CEL W½ NW NW 34-2-7W	T. D. 776	Dry
Pearce-Brown	5	CEL NW NW SE 27-1-8 W	1676–1848	12

Tulsa County

Petroleum et al	9	NWc SW NE 4-16-13	1993–2045 OWD	2
Dickerson	3	NEc SW 12-16-13	1486–1489	6M
Posey-Short	1	NWc SW NW NE 4-19-12	T. D. 1253	Dry
Sunray	1	CWL SW NE 21-19-12	T. D. 2438	Dry
Continental	1	SWc NE 29-19-12	T. D. 2344	Dry
Bynum et al	14	CWL E½ NW NE 8-17-13	T. D. 1740	Dry
Cates et al	3	CSL NE NE 13-16-13	T. D. 1507	Dry

Wagoner County

Little Ed	14	NEc NW SW 2-16-14 E	1474–1487	5
Sevreda et al	1	NEc SW SE 25-17-16	1306–1320	30
S ryker	2	NWc SW 19-18-16 E	T. D. 1000	Dry
Mayslew	1	NEc NW NW 23-18-16	T. D. 910	Dry
Hornecker et al	1	SWc NE NE 29-18-16	T. D. 900	Dry

KANSAS

Butler Count

Prairie	1	NEc SE NW 33-27-7	T. D. 3290	Dry
Empire	5	C SW SW NE 27-26-7	2120–2169	80
Allison et al	3	C SW SE NW 3-28-6	3068–3074	250
Sitram	7	NWc SW NE 35-26-5	T. D. 3206	Dry
Magnolia	1	C SESE SW 34-27-6	T. D. 3510	Dry
Magnolia	1	C SW SW SW 16-28-6	T. D. 3166	Dry
Magnolia	3	C SE NE NE 20-28-6	T. D. 3160	Dry

Chautauqua County

Prairie	9	NE SW NE 26-34-11	T. D. 1325	Dry

Coffey County

Ritchey-Moore	1	C NE NE NE 14-21-13	T. D. 1862	Dry

Cowley County

Roth et al	1	NWc SW 29-31-5	T. D. 3027	Dry
Foster-Deal	1	C NL NE NE 7-31-6	T. D. 2829	Dry
Lewis	9	NEc SW NE SW 31-30-6	2855–2885	25

Greenwood County

Phillips	2	C SE NE NE 11-22-10 E	2080–2146	100
Empire	9	C SW NE SW 11-22-11	1856–1878	80
York State	10	C SW SW NW 33-22-11	1903–1936	15
Simmons et al	3	C NW NE SW 26-23-11	1880–1906	50
Mid-Kans	1	NWc SW 20-25-9	2355–2444	25
Empire	2	C NW NE 7-27-9	965–979	½M
O'Neil et al	1	C SE NW NW 29-22-11	T. D. 2125	Dry
Davis et al	1	C SE NE NE 25-24-10	T. D. 2043	Dry
Syndicate	2	C NW NW SW 6-24-12	T. D. 1815	Dry
Troxell et al	1	c SW NW NE 34-24-12	T. D. 1754	Dry

Lyon County

Sheedy et al	12	C SE NW SW 3-21-10	2254–2277	10

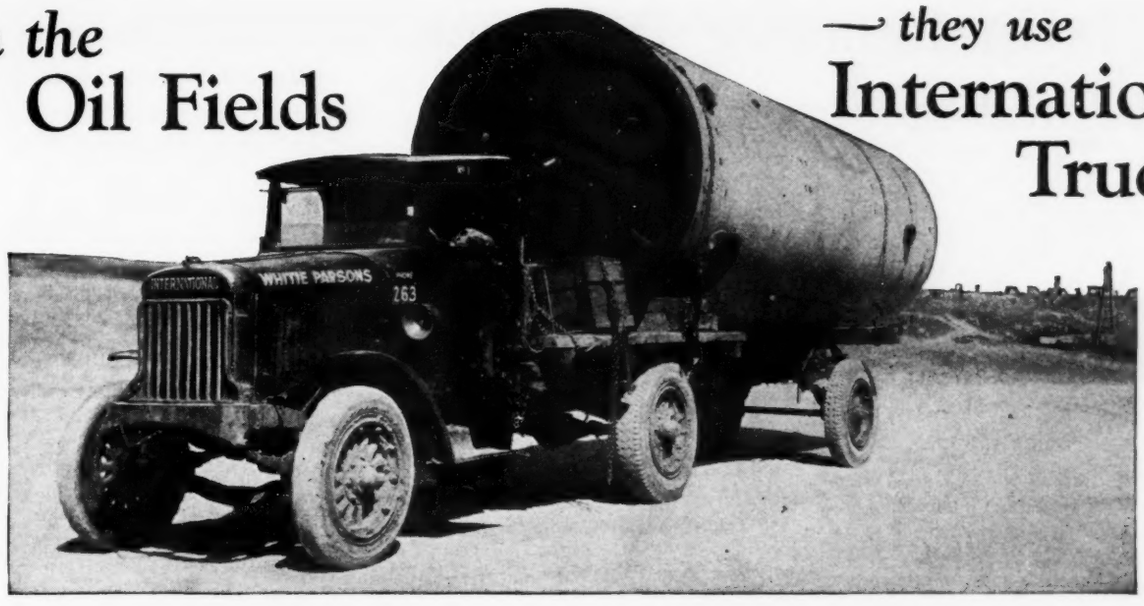
Wallace County

Harvey	1	SWc 12-13-39 W	T. D. 2105	Dry

Woodson County

Fields et al	1	C SESE NW 27-24-14 E	T. D. 1730	Dry

In the Oil Fields *— they use* International Trucks!



These Letters Tell Why:

"After having had experience with a number of different makes of motor trucks for pipe line work, we have finally standardized on Internationals. We are now operating six trucks and are pleased to state that our expense has been very considerably less on Internationals than any other truck that we have ever operated. We have used these trucks almost entirely for laying pipe lines, which we consider to be the most difficult work in an oil field. We have operated in the past year in practically every oil field in the State of Texas, with entire satisfaction. We are giving you an order for our seventh truck and assure you that our future business will be in your hands." Yours very truly,

GIBSON BROTHERS,
Dallas, Texas

"We have made the International truck standard equipment and have disposed of all other makes. From our experience we believe that the International Model 63 truck will give more efficient and economical service under the severe strains than any truck of any other make. We have been particularly well pleased with the ability of these trucks to deliver their loads in territory where the roads are very bad or, as is frequently the case, where there are no roads at all.

"We are now operating twelve International trucks with trailers and hauling loads of 12,000 pounds average weight and are glad to say that they are giving satisfaction in every respect." Yours truly,

JOHN B. BARBOUR TRUCKING CO.
By John B. Barbour Iowa Park, Tex.

"It is a pleasure for us to write you that we have thoroughly tried out your equipment and we must confess that your heavy-duty trucks are the best we could possibly secure for our business, and we have tried other makes of trucks.

"One other feature is the unusual low cost of replacement parts. The truck is not manufactured for heavy oil field work that does not at times require replacement of parts.

"We believe your heavy-duty motor in your trucks is about as good as can be had; for instance, we have three Model 63 trucks whose motors have not been touched except to replace oil, since last August. In other words about ten thousand heavy-duty miles without any motor expense."

Sincerely yours,
TRIANGLE TRUCK COMPANY
By C. R. Virtue
Yale, Okla.

"We are operating two 3-ton International trucks and one 5-ton International and find that they do their part in heavy hauling over rough roads. We do not have much paving.

"We got better service out of International trucks than any other trucks which we operated, and at less expense. And another thing is that your parts service is the best that we can get. In getting a truck a purchaser must watch and get a truck that he can get parts for." Yours truly,

W. A. McPHERSON, *Contractor*
Okemah, Okla.

"We are now operating nine International trucks with which we have been doing oil field contracting for a number of years. We have used all kinds of trucks, but we want to say that we find that we can haul a heavier load and make locations with the International Model 63 3-ton truck that are very difficult to make with most any other kind. These trucks are handling rotary tools, and we have no trouble in handling 100-horse power boilers on International 63s and trailers. Our operating expense on these trucks is very light, compared with the kind of work they are doing. We also want to compliment you on the kind of repairs service we are able to get from the International Harvester Company, as it is almost instantaneous." Yours very truly,

CLAY BROTHERS,
By E. C. Clay
Okemah, Okla.

"We purchased our first 3-ton Model 63 International in May, 1925. This truck has been used continually since that time, hauling fuel oil, which we believe is one of the hardest jobs called on the truck in the oil field. We bought our second Model 63 in March of this year and wish to say that we are very well pleased in every way with the service of these trucks. We have always been able to get parts promptly from your service station at Wichita Falls. We can recommend Internationals to any one in the fuel oil business." Yours very truly,

H. & H. FUEL OIL CO.
By A. Y. Hampton
Wichita Falls, Texas

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Hold Up Insurance Protection Limited at Service Stations

CHICAGO, Aug. 31

ROBBERIES of gasoline filling stations have become so numerous that insurance rates on service stations have advanced to a point where coverage is almost prohibitive in price. Some insurance companies have withdrawn from the field entirely. They can't see their way clear to protect the service station owner against the attacks of criminals at any price.

By its very nature the filling station seems to be the prey of cheap hold-up men. It is a place where cash accumulates. It is an unprotected place, not immediately adjacent to other buildings. It is on the street level, easily accessible by automobile. Two or three robbers in a car might attack three or four stations successfully in one evening. each good for booty to the extent of $100 to $150.

The enemy of the service station cash drawer is not the same type of robber that loots banks. Bank robbers lay careful plans, wait weeks or months for the opportunity, take fearful chances of being shot and, if they are successful, they have to count on being refugees for life. The filling station robber is a "piker." His chances are small and his reward correspondingly small. For this reason such robberies are more numerous.

To have complete coverage a filling station owner has to buy several policies as a rule. Annual premiums on open mercantile stock cost $17.50 per $1,000. Interior hold-up protection costs $20, messenger hold-up insurance costs $10. Protection for a safe against burglary, if it can be had at all, costs in proportion to the class of safe in use at the station. If the safe is only of the fire resisting type the premium is $18.34 per thousand and if it is a so-called burglar-proof safe the charge is $5.50.

Safes for Double Duty

SAFES which Underwriters' Laboratories of Chicago have examined and classified as to fire resistance as well as burglary are three in number. They are made by Herring-Hall-Marvin Safe Co., Hamilton, O.; Meilink Steel Safe Co., Toledo, O., and Mosler Safe Co., Hamilton, O., Oil companies, as a rule, are not especially interested in fire resisting safes as such. They take precautions against fire in a general way, knowing that a fire at a filling station is something that must not happen. The contents of the safe would be a small detail of the disaster in the event of a fire.

The York Safe & Lock Co., York, Pa., and the Diebold Safe & Lock Co., Canton, O., both put out a safe bearing the label of Underwriters' Laboratories, class T-20, which means they are fire resisting and afford some measure of protection against burglary. The York Safe & Lock Co., also markets a safe offering protection against burglary which was designed for adaptability to gasoline stations. Incidentally, the Standard Oil Co. of Indiana is putting these safes in a good many of its new service stations and it is said the company has standardized on that type.

Underwriters' Laboratories does not actually examine and list safes classified with regard to their fitness for service station duty. However, certain safe manufacturers have made application to the institution for such listing and it is possible that the service may be offered by that institution. Two Chicago manufacturers have designed and built safes exclusively for the service station trade. One of the devices is the Ehrlick Safe which pioneered the field and the other the Protect-U-Safe. Both offer protection for comparatively small amounts of money against the "piker" robber or quick-job highwayman. The Ehrlick is an adaptation of a cash box for C. O. D. collections first used on pie wagons in Chicago by the Case & Martin Pie Co.

Safe Affords Insurance

THIS short discussion of safes for service stations is injected because certain insurance companies say they will insure gasoline stations only when the station is protected with a certain kind of safe. For instance: a representative of the Ocean Accident & Guarantee Corp., Ltd., recently told National Petroleum News that the company would not write hold-up insurance on filling stations under any consideration; that it would not protect a service station's stock of goods; and would insure money inside of a locked safe, outside of business hours, only when the safe was a round-door chest manufactured by one specific firm.

The Fidelity & Deposit Co. of Maryland will not insure anything around a service station, regardless of what it is. The Massachusetts Bonding & Insurance Co. will not write hold-up insurance on filling stations at all: but, if the station is in the right sort of a location, the firm will protect its open stock of merchandise. "And as an accommodation to a good customer," its representative says, "might insure money inside of a good safe outside of business hours." About the only firm offering protection to filling stations in any form is the National Surety Co.

A special form of protection written by the National Surety Co., has been taken up recently by service station operators in Chicago. It was not designed as protection for service stations but was worked out as a coverage for a small mercantile concern.

National Surety's Fraud Bond

THE policy is called a "Fraud Bond," because it protects the insured against all kinds of fraud, but only to a limited degree. This policy itself is fairly high-priced protection, but it so happens that the low cash amount of each liability (the extent to which the company will indemnify losses) is enough to cover the average service station, for instance:

Under the one bond the insurance company protects any one service station against larceny and embezzlement to the extent of $200; against robbery or hold-up to the extent of $300; safe burglary to the extent of $300; messenger robbery to the extent of $300; half of its bad check losses up to $200; counterfeit money accepted up to $200, and against a few other things, for $45 a year.

If it were bought by the thousand dollars worth of protection, this rate might figure as high or higher than some other policies. But the gasoline station is not in need of more than the amounts named. Two hundred dollars is enough money for a service station to have on hand for change and $300 is all that is ordinarily necessary to leave in the safe over night, or to send to the bank at one time by messenger. Of course this would not apply perhaps where a service station was serving as the main office of a small jobbing company. The coverage in that case might be too small.

Auto Accident Brings Death

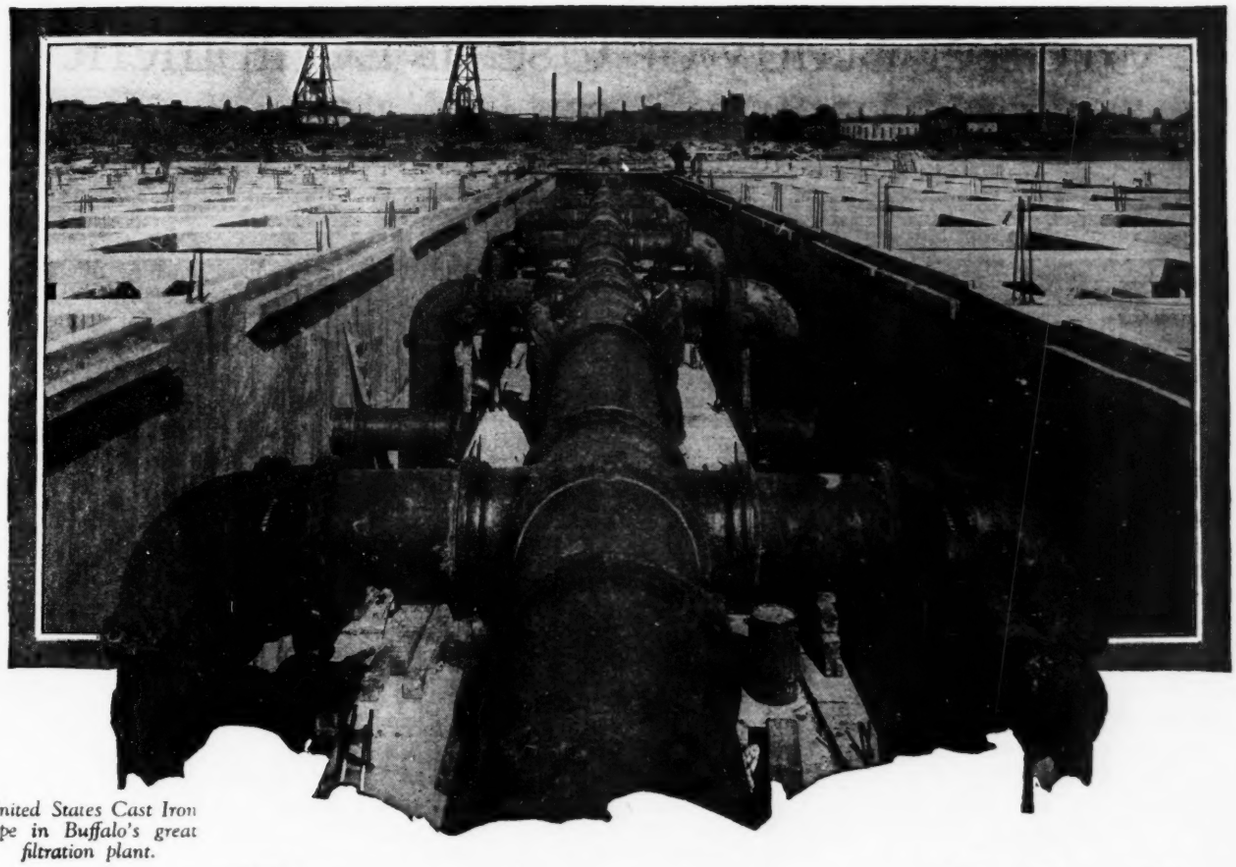
CLEVELAND, Aug. 30.—An automobile accident caused the instant death on Aug. 13 of Claude F. Chard, Cleveland district manager for The Austin Co., engineers and builders of this city.

Mr. Chard was driving in a rain from Cincinnati to Cleveland and had planned to go from here to Millville, N. J., to join his wife and daughter on a vacation. A front tire blew out which caused his car to run into the ditch, and then strike a telephone pole. He joined the Austin Co. in 1918 and previous to that had been with Westinghouse, Church, Kerr Co., construction engineers in New York. His territory with the Austin Co. comprised southern Ohio, Kentucky and southern Indiana.

A. P. I. Man is Chautauqua Speaker

SULPHUR SPRING, ARK., Aug. 30.—Judson C. Welliver, publicity director for the American Petroleum Institute, New York, was to be one of the speakers on the southwestern chautauqua, which is holding its second annual session here.

Mr. Welliver's subject was "A Short Story of the Petroleum Industry and Its Contribution to the American Home." He was scheduled to speak on the evening of Aug. 27.



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Waterworks engineers prefer Cast Iron Pipe on account of its permanence

This quality is especially valuable where intricate installations are necessary such as in this great filtration plant.

The length of life of the Cast Iron Pipe has not yet been determined. The first Cast Iron Pipe in this country was laid down over a hundred years ago and is still in use.

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Greater Study of Use of Equipment Must Follow Standardization

By Warren C. Platt
Editor

A GREAT compliment is paid the standardization of oil field equipment through the American Petroleum Institute by F. E. Anderson of the Columbus Sucker Rod Co., Columbus, Ohio, in commenting upon the editorial discussion which is running in these pages on whether or not standardization should go beyond setting up standards providing for interchangeability of parts, or also providing for quality of the material and of the product.

Mr. Anderson points out an advantage to the industry, to the oil engineers and to the purchasing agents of the industry, something which we have not noticed in any of the discussions on standardization. He said:

> The movement started by standardization marks the beginning of the awakening of the oil industry to the purchasing of equipment from an engineering standpoint, as well as from practical experience.
>
> "This presents a new and great problem in the oil field today which is, that education pertaining to the use of equipment is required with the higher grade of equipment due to standardization and the advent of engineering staffs of oil companies. This higher grade equipment must be handled, not in any old way, but with care and under the supervision of experienced men. We believe that all manufacturers are willing to strive to a higher standard in their products if it will be used as such.

Many manufacturers have long urged that there should be more understanding of the proper uses of equipment in the field, and this is true not only in the field, but in refineries, marketing and in all lines of business. The deeper drilling, calling for heavier strains upon all the equipment, makes it necessary to use the equipment more intelligently in order to get the most out of it. Without question one of the great things that should come out of this standardization movement will be that the oil companies will push more vigorously the education of their employees for the proper use of oil equipment. The standardization movement offers the best place for manufacturer and user to come together and arrange for this instruction in the use of equipment.

Mr. Anderson adds this further thought to the discussion which has been going on. He says:

Encourage New Ideas

"WE trust that the oil companies will not use standardization as a club when new ideas are presented, but instead, encourage them provided it can be shown that the improvement, if made from an engineering or practical standpoint, will produce a saving not from first cost but over an operating period of a certain length of time. Then standardization will not mean stagnation."

As has been pointed out in previous discussions in NATIONAL PETROLEUM NEWS on this subject, some of those active in standardization work believe that the interest of the industry and the interest of the manufacturer can best be served by there being standards for quality of products, as well as standards for interchangeability. It has been pointed out that, should the oil industry ask standards of quality for the products of these manufacturers, then the oil industry may be in an embarrassing position when users of petroleum products demand quality specifications on those products. Such demands have already been made and the probabilities are the demands will increase in number and in strength. Automobile manufacturers have long been urging specifications for quality of gasoline and lubricating oil. Demands of the same kind have been made by states. Generally these demands have been opposed by the oil industry.

This paper has, in previous articles, pointed out that the oil industry has urged on those asking specifications for petroleum products that the benefits sought can be accomplished by users of those products working with the oil industry, not for specifications but for better products and for a better understanding of the use of those products.

Follow Same Method

THEREFORE this paper has asked if the same method wouldn't accomplish the best results between the oil industry and those supplying it with equipment. In this way specifications would be avoided and, in the opinion of many, the development and the purchase of high class equipment would be speeded up.

Many comments have been received on the editorials up to date.

A. W. Peake, general superintendent, producing department, Midwest Refining Co., Casper, Wyo., writes:

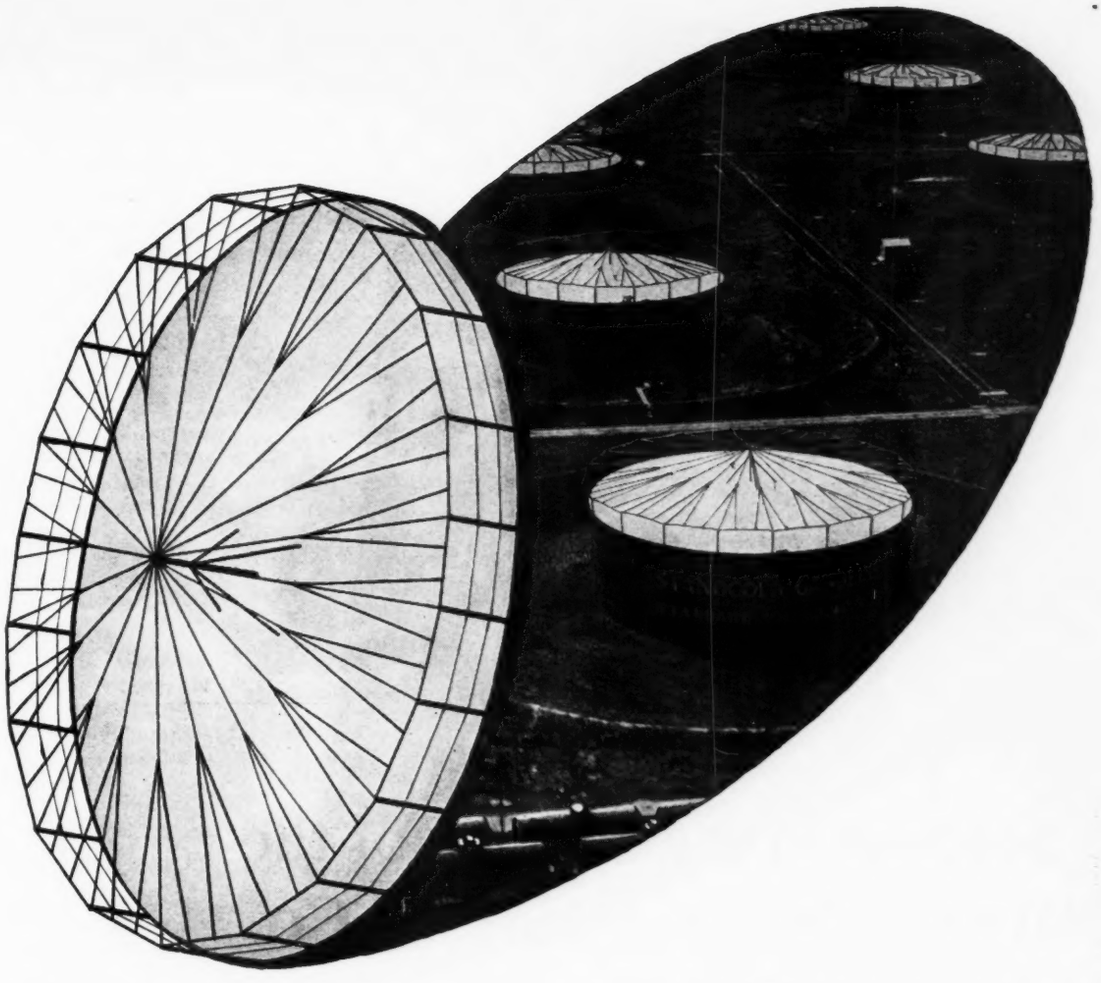
> "I have read your editorial of July 21st and think it is very good and I wish to express my approval of your position in the matter. I believe your point is well taken in regard to standardizing quality specifications for gasoline and refined oil and I do not believe that standardized quality specifications would work out to the advantage of the oil industry if applied to oil field tools and equipment.
>
> "The outfit which turns out the best quality of material or of refined oil products should be entitled to reward of higher prices and increased business and should not be held down to any set form merely in order to enable his competitors to turn out a product of uniform brand or quality. The principal benefit of standardization, in my opinion, is to eliminate needless duplication in styles, types and sizes, rather than to make a uniform grade or quality. It seems to me that the industry should not go any further in the way of standardization in either of those lines at this time."

Ralph J. Reed, chief engineer, Union Oil Co. of California, writes:

> "Referring to the editorial on standardization I think you are right in saying that the industry should very carefully consider the effect of standard specifications for materials. Unless it is ready to accept specifications for its own products, it had better tread softly in writing specifications for the products of others.
>
> "So far as the committee on steel tanks is concerned, I have taken the attitude that beyond specifying materials already made standard by the steel manufacturers and by the American Society for Testing Materials, nothing further should be done and that our A. P. I. specifications should cover proper engineering design only."

H. W. Fletcher, chief engineer, Hughes Tool Co., Houston, Texas, writes:

> "I personally agree with the views set forth in your editorial that the American Petroleum Institute should not attempt to establish specifications for materials but should specify only as to dimensions and workmanship. Quality in any material is not only a function of its chemical composition but also of the aggregate of all the manufacturing steps from the raw material on, and hence very difficult to define in any practical specification.
>
> "As you suggest, improvement of materials must result from competitive selling which, in the long run, will eliminate unsatisfactory products. This principle should operate with a special force in the oil industry, where the expense of failures so far out-weigh the initial



A shield for your tankage
against lightning and evaporation

IN a flash, a lightning fire quickly turns a group of storage tanks from assets into liabilities. More slowly but just as surely evaporation losses take their annual toll in millions of barrels.

Johns-Manville can protect your tankage against both these hazards. Hold evaporation losses at a minimum with Johns-Manville Vapor Tight Insulated Tank Tops (patented, other patents pending). Efficiently safeguard wood decks against lightning fires with the Johns-Manville Grounded Conductor Network (patent pending).

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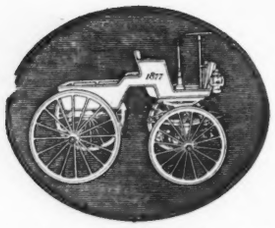
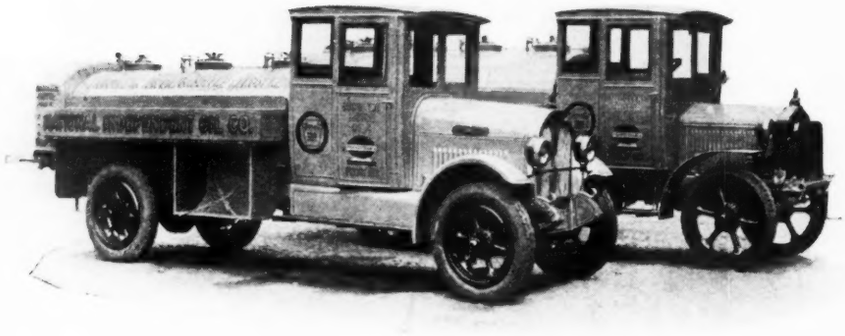


The First SELDEN—1877.



ROADMASTER Unit 53

5 Seldens in the Service of the National Independent Oil Co., at York, Pa., who say:

"You no doubt will be interested in knowing that we are convinced Selden Trucks render wonderful service.

"We have driven two of your trucks 50,000 miles each over mud roads for three years and these jobs are still giving us good service.

"We are now using five of your trucks and are very much pleased with all of them. In addition to rendering wonderful service they also make a beautiful appearance."

(*Signed*) H. C. Neller, Treasurer.

6-Cylinder Speed Trucks
PACEMAKER and ROADMASTER

4-Cylinder Models
1 1-2 to 5-7 Tons Capacity

SELDEN TRUCK CORPORATION, ROCHESTER, N. Y.

Factory Branches

Long Island City, N. Y. Boston, Mass. Tulsa, Okla.

investment as to make maximum 'quality' a prime consideration."

M. G. Stewart, manager, Pelican Well Tool & Supply Co., Shreveport, comments as follows:

"It is the opinion of this writer that the adoption of dimensional specifications, standardized for the purpose of securing interchangeability of parts, would save the producing end of the oil industry a tremendous amount of money and the adoption of such dimensional specifications is highly desirable.

"Such a program should not, however, be permitted to extend to matters of design or of choice of materials. The determination and adoption of standards in these fields would stifle initiative, retard the sale of an improved product, and could result only in stagnation rather than in progress."

NATIONAL PETROLEUM NEWS welcomes all comments on this subject, because it believes that the more thoroughly it is discussed, the more thoroughly the subject will be understood and the more intelligent a decision can be made.

Gasoline Pump Extends On Arm to Tank

UTICA, N. Y., Aug. 30.—A new type of gasoline pump of 12 gallon capacity, has been invented by L. F. Coggeshall of this city and has already been put into use at the Failing's filling station at the corner of Genesee St. and Emerson Ave. here.

The new pump, instead of being stationary, is extended on an arm and will swerve to any position either behind or at the side of the car wherever the tank is located.

The hose, which is five feet long, is attached to a quick opening valve. An electric switch, which is located under the glass container, opens the pump, and automatically shuts off when the gasoline line reaches the proper level.

It is claimed that the pump is a time saver as it eliminates the necessity of the attendant making several trips back and forth to open a valve or turn a crank before the customer's tank is filled. It also eliminates unnecessary loss of gasoline by the hose falling out, and the possibility of an electric spark due to special construction of the motor.

The pumps will be manufactured here.

WOODSVILLE, N. H.—The H. & R. Oil Sales Corp. has been formed here by A. J. Hazeltine and R. S. Rinehart, for the distribution of Gulf Refining Co.'s products.

A 15,000 gallon storage tank has been installed as well as 10 visible gasoline pumps.

Water Tubes in Pipe Stills Would Cool Oil Tubes and Make Needed Steam

By B. N. Broido
Consulting Engineer, The Superheater Co., New York
Delivered before Meeting of A. S. M. E., San Francisco, June 28

PART 2

ONE of the main requirements of a pipe still—that the gases be evenly distributed over the entire length of the tubes—is not met by this furnace, as all the gases from the carborundum furnace are ejected from a comparatively small area. Fig 3 shows another arrangement where radiant heat can be utilized and in which this disadvantage is eliminated.

Heat Transmission in Pipe Stills and Heat Exchangers

THE whole subject of heat transmission in pipe stills and heat exchangers is as yet comparatively uncertain. Data from heat transfer in boilers cannot be applied to the case of oil stills, because in boilers part of the heat is absorbed by the process of evaporation, while in pipe stills most of it is used to increase the temperature of the oil, and the tube temperature naturally has to follow this increase. Furthermore, a number of tests have been made and formulas established for heat transmission from gases to tubes. Practically all of them, however, were limited to gases flowing inside a tube.

Based on theoretical analyses and experimental tests, H. Reiher comparatively recently made a study of heat transmission in Munich, Germany,[1] from gas flowing outside of tubes with different tube arrangements—in straight and staggered rows, and with different numbers of tubes. For pipe stills, only staggered arrangements of many rows of tubes need be considered. Reiher found that the relation between the heat transmission and the factors influencing it can be expressed in a formula of the following nature:[1a]

$$h = C \frac{\lambda}{d} \left(\frac{wdp}{\mu} \right)^n$$

where the constant C and the exponent n depend upon the arrangement of the tubes. For staggered tubes in two rows:

$C=0.100$ $n=0.69$

for three rows:

$C=0.113$ $n=0.69$

for four rows:

$C=0.123$ $n=0.69$

for five rows:

$C=0.131$ $n=0.69$

High and Low Gas Velocity

H. REITSCHEL[2] also made a study of heat transmission between gases and tubes, the gases being outside of the tubes. He found the same relation to obtain as did Reiher, but his constants and exponents were somewhat different (see Appendix No. 1).

(To be published next week)

Reitschel conducted his tests with rather low gas velocities, while Reiher used considerably higher velocities. It seems that a compromise between the two, particularly for the lower velocities, would give the correct results (see Appendix No. 1).

The above formula gives the heat transmission between the gases and the tubes per hour per unit of surface area per degree temperature difference between the gas and the metal of the tube. It is independent of how the heat is absorbed from the tube inside, so that it can also be applied to pipe stills. The fluid inside of the tube will influence the temperature of the metal, and in this way also the total heat transmission from the gas.

From results of tests with two pipe stills having respectively 4-inch o.d. tubes ⅜ inch thick and 2⅜ inch o.d. tubes ¼ inch thick, the author determined, applying the above formula, the temperature of the tube wall at different parts of the stills, and from this the heat-transmission coefficient between the tubes and the oil. This coefficient varies with the velocity of the oil and its viscosity, and also with the diameter of the tube. No attempt was made to determine the influence of the oil viscosity upon the heat transmission, but a number of readings at different oil velocities with approximately the same viscosity or the same temperatures led the author to certain conclusions which may be of general interest.

The oil used in the 4-inch still was heavy Mexican crude oil of 12 deg.

[1] Mitteilungen uber Forschungsarbeiten (Berlin), V.D.I. Heft 269.
[1a] For nomenclature see Appendix No. 1.

[2] Mit der Prufungs Anstalt fur Heizungs und Luftungseinrichtungen der Technischen Hochschule Berlin, Heft 3.

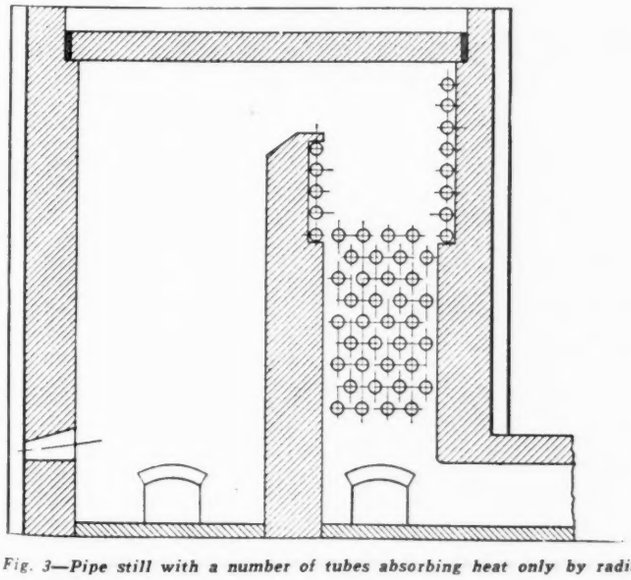


Fig. 3—Pipe still with a number of tubes absorbing heat only by radiation.

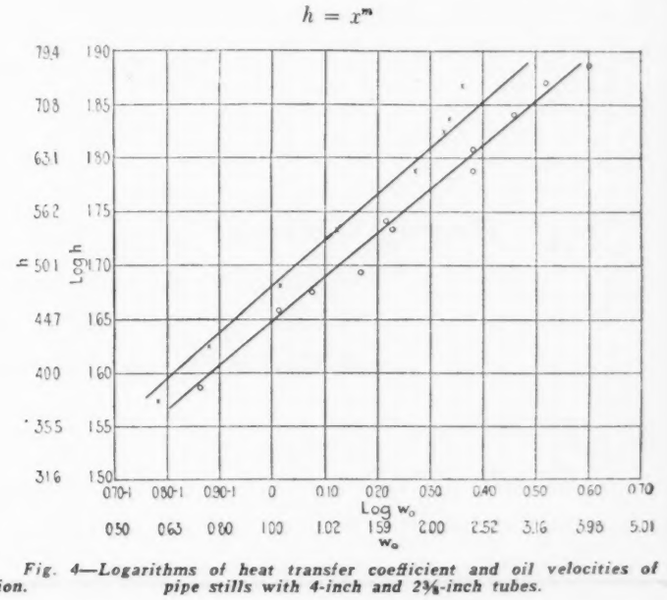


Fig. 4—Logarithms of heat transfer coefficient and oil velocities of pipe stills with 4-inch and 2⅜-inch tubes.

The Cross Cracking Process

CROSS Units in operation and building at this time, have a thruput capacity of over 181,000 barrels daily. REPEAT orders included in this total, amount to over 91,000 barrels daily.

WHY were these REPEAT orders given?

The M. W. Kellogg Co.

7 Dey St.

New York City

Branch Offices:

700 Baltimore Ave., Kansas City, Mo.
304 Lane Mortgage Bldg., Los Angeles, Calif.
444 Market St., San Francisco, Calif.

Baumé. In the 2¾-inch pipe still, gas oil of 36-40 deg. Baumé was used. In the former the oil was heated from 400 to 850 deg. fahr.; in the latter, from 600 to 900 deg. fahr. At this high temperature the viscosity of the oil is comparatively low and is not reduced appreciably with the increasing temperature. The coefficient was determined for each of the above two tube sizes separately. An effort was made to develop relations between the heat transfer and the velocity of the oil in the tube. The general relation can be expressed in the following equation:

The exponent m was determined in the following way. If

$$h = \text{Const. } w_0^m$$

then

$$\log h = m \log w_0 + \log \text{Const.}$$

where h = coefficient of heat transfer in B.t.u. per hr. per sq. ft. per deg. fahr., and

w_0 = velocity of oil inside tube, ft. per sec.

By plotting the logarithm of h against the logarithm of the oil velocity the curve gives the expression for the exponent m. If it is a straight line, the exponent has a constant value. The section on the ordinate gives the logarithm of the constant.

In Fig. 4 the logarithms of h have been plotted as ordinates and those of w_0 as abscissae for both pipe stills. While all the points, particularly those for the smaller still, do not follow directly in a straight line, this, however, is probably due to the slight changing of the viscosity with the slightly changing temperature, and it is reasonable to assume that if all the readings could be taken at exactly the same temperature or the same viscosity, these points would be closer to the straight line.

From this we may conclude that the exponent m for the 4-inch still is 0.84, while for the 2⅜-inch still it is 0.87. The constants are 44.5 and 48.1, respectively, for the two stills. The difference is to be expected, as in general, all other conditions being the same, the heat transmission increases with decreased tube diameter. The above constants or coefficients hold for the sizes of the pipes mentioned, for oil temperatures between 400 and 900 deg. F., and for velocities of from 2 to 8 feet per second. While, as mentioned above, the heat transmission in pipe stills depends upon the viscosity of the oil, for cracking, where the oil temperatures are very high, the viscosity will have a comparatively slight influence. When the pipe still is used for heating oil, particularly heavy oil, lower values for the heat-transmission coefficient should be taken.

Finding Tube Wall Temperature

THE heat-transfer coefficient between the gases and the tube, and the oil and the tube, enables us to determine the temperature of the tube wall under certain conditions. The knowledge of the wall temperature is very important in connection with the operation of a pipe still. For instance, in the production of lubricating stocks or in the running of any crude, it is extremely desirable to eliminate the pyrogenic decomposition. The temperature of the oil immediately near the tube wall is higher than the average temperature of the oil. It is therefore important, when the pipe still is used for heating crude oil, to have the temperature of the tube metal not too high in order not to overheat the oil near it.

In cracking, it is very essential that the temperature of the oil shall not exceed a certain level. The object of cracking is to alter the heavy molecules so that low-boiling hydrocarbons will be produced that would not appear on ordinary distillation. An excessive temperature will mean a large production of products of decomposition. As soon as the action begins to be a total decomposition, permanent gases will be formed, and both carbon and heavy asphaltic bodies will remain as residue.

It is therefore very desirable that the temperature of the metal of the tubes in which oil is being cracked be kept below a predetermined point. As a matter of fact, the author is of the opinion that too little consideration is at present given to the metal temperature of tubes in pipe stills. If this were done, less "fixed" or uncondensable gas and less carbon would be formed, so that the cracking of oil would be more profitable.

The foregoing heat-transfer constants and exponents apply to bare steel pipes, clean inside and outside, and when the heat is absorbed by convection only, and in no degree by radiation. If the tubes are covered inside with carbon or outside with soot, the heat-transmission coefficient is accordingly lower.

Tubes With Cast Iron Gills

A NUMBER of pipe stills have been installed with the so-called extended surface, or tubes covered with cast-iron sleeves or gills which increase the surface in contact with the hot gases. As the principal resistance to the heat flow from gases to oil is on the gas side, an increase of the surface exposed to the gases per unit of length seems to be beneficial. The total length of the coil required to absorb a certain amount of heat can be reduced appreciably, and correspondingly the pressure through the coil would also be reduced. When the still is used for heating oil to a comparatively low temperature, or when light oil is heated even to higher temperatures, extended surface seems to be advantageous. It should not be forgotten, however, that with the extended surface a new resistance to the heat flow is introduced, namely, that between the cast-iron gills and the steel tube, which resistance increases the longer the still is in operation.

As with the extended surface a certain amount of heat can be absorbed with a shorter tube length or with less inside heating surface, the temperature difference between the oil and the tube wall must necessarily be correspondingly greater. As mentioned above, high tube-wall temperatures are undesirable with a pipe still used for cracking. From this one would conclude that for cracking stills, whenever possible, bare tubes should be used.

Also with heat exchangers between oil and oil, or between oil and water, it is advisable to consider separately each individual film resistance, or the heat transfer between each of the fluids and the wall.

Very interesting and accurate tests with heat transmission in oil coolers were made by E. Heinrich and R. Stueckle[1] at Stuttgart. Five different arrangements of coolers were tested. The oil was cooled by water. One cooler was a double tube with the inside brass tube about 1¼ inch o.d. and 0.04 inch thick, and the outside steel tube 3¼ inches i.d. The second consisted of a bundle of brass tubes of the same size enclosed in a shell, with water inside and oil outside the tubes, both flowing parallel to each other but in opposite directions.

The third, fourth, and fifth coolers were standard commercial heat exchangers with baffles inside forcing the oil to change its direction and flow more or less perpendicular or normal to the tubes. The oil used for the tests had a specific gravity of 0.86 and a viscosity of 148 Saybolt seconds at 100 F. The tests apparently were carried out carefully. The coolers themselves as well as the weighing and measuring apparatus were all in good condition. The results, therefore, should be very reliable.

Rate of Heat Transmission

FROM a comparison of exponents for all five coolers in these tests it would appear that where the oil flows normal or practically normal to the tubes carrying the water, the heat-transmission coefficient varies with the 0.3 power of the velocity of the oil. This seems to be independent of other conditions and of the design of the cooler.

The exponent, however, increases the nearer the flow is streamline or parallel to the tubes carrying the water. Where the flow is parallel all the way, the heat transmission increases in the same proportion as the oil velocity. To a certain extent the above is true of all heat exchangers, as will be shown later.

By the above-mentioned heat-transmission coefficient in connection with the oil heat exchanger is meant the total heat-transmission coefficient between one fluid and the other. As the heat transmission between water and a tube under different conditions is fairly well established,[1] the author has endeavored to determine, first, the water-film coefficient for the most important tests; second, the heat transmission between

[1] McAdams, et al., in Publications of the Massachusetts Institute of Technology, Serial Nos. 17, 40, 77, 92 and 121.

Table 1 Heat-Transfer Coefficient *h* Between Oil and Tubes in Oil Coolers

	h, B.t.u per hr. per sq. ft. per deg. fahr.	Water velocity, ft. per sec.	Oil velocity, ft. per sec.	Oil temp. deg. fahr.
Cooler I—Oil flow parallel to tube	23	0.89	1.66	179
	32	0.88	2.38	180
	43	0.89	2.93	181
	51	0.88	3.53	181
Cooler II—Oil flow parallel to tubes almost over the entire length, and normal to tubes at inlet and outlet	45	0.42	2.21	168
	39	2.30	2.21	162
	35	0.77	1.84	165
	40	0.77	2.16	166
	47	0.77	2.62	168
	52	0.76	3.28	169
Cooler IV—Normal to tubes over the entire length	53	0.33	0.46	130
	77	0.32	0.86	141
	96	0.33	1.23	141
	92	0.33	1.23	144
	116	0.33	1.53	143
	140	0.33	1.82	144
	153	0.32	1.84	147

Table 2 Constants and Velocity Exponents For Heat Transmission in Oil Coolers

(*C* = constant and *m* = exponent of heat-transfer coefficient depending on velocity.)

	C	*m*
Cooler I—Oil flow parallel to tube	14	1.00
Cooler II—Oil flow parallel to tubes almost over the entire length, and normal to tube at inlet and outlet	23	0.72
Cooler IV—Oil flow normal to tubes over the entire length	84	0.63

the metallic walls and the oil; and third, the constants and exponents of the heat transmission depending upon the oil velocities. The results are given in Table 1.

Table 1 gives the coefficient *h* for oil of three different coolers at different oil velocities. With all coolers *h* increases with the oil velocity. It also increases with the oil approaching normal or perpendicular flow to the tubes.

Table 2 gives the constant and velocity exponents for the same exchangers. It is interesting to note that with cooler I the exponent is 1, which shows that the heat transfer between oil and a tube increases in direct proportion to the oil velocity when the oil flows parallel to the tubes. It increases, however, with the 0.63 power of the oil velocity when the oil flows normal or perpendicular to the tube. It is reasonable to assume, and has also been verified in many instances in practice, that this applies to practically all heat exchangers independently of what the other heating or cooling fluid is, so long as the oil velocity is high enough or the flow is turbulent.

On the other hand, the constant is smallest with the oil flow parallel to the tubes, and is greatest with the flow normal to the tubes.

Heat transmission in heat exchangers also depends upon the viscosity of the oil. Interesting experiments were conducted with oil heated by steam in the research laboratory of the Rensselaer Polytechnic Institute.[1] All other conditions being the same, the heat transmission between oil and the tube varied from 49 B.t.u. per hr. per sq. ft. per deg. fahr, temperature difference for kerosene with a viscosity of 36-40 Saybolt seconds at 100 deg. fahr., to 40 B.t.u. for crude oil of 53 Saybolt seconds at 100 deg. fahr. and 30 B.t.u. for cylinder oil with a viscosity of 95 Saybolt seconds at 212 deg. fahr.

Frictional Losses in Oil Flowing Through Tubes

MOST of the modern pipe stills are arranged so that the oil flows through all tubes in series. In a cracking still where the temperature of the oil is to be raised 300 to 600 deg., the total length of the tubes through which the oil flows may be 2000 feet or more, and as it is desirable to have high oil velocity in the pipe still, the friction loss or pressure drop in the still becomes very high.

At the same time it is of importance that the oil be heated gradually and uniformly in a pipe still. In cracking oil it is very important that the oil be of the same temperature throughout the cross-section of the pipe. With low oil velocity, or where the flow is parallel to the tubes, the layers of the oil nearer to the tube wall are considerably hotter than those in the center. With high velocity, or in the turbulent region, however, the heated outer layers of the oil are constantly carried into the cooler core of the pipe and a more constant temperature throughout the cross-section of the pipe is obtained.

The study of the flow of oil through pipes and the frictional loss is therefore an important factor in connection with pipe stills.

It has been found from experiments that the frictional factor f must be some function

$$f = \Phi\left(\frac{dwp}{\mu}\right)$$

of the pipe diameter d in feet, the average fluid velocity w in feet per second, the density p in pounds per cubic foot and the viscosity μ in poundal-seconds. When plotting f against $\left(\frac{dw\rho}{\mu}\right)$ a single curve, Fig. 6, is obtained which is sufficiently accurate for ordinary purposes.

This curve shows that at constant velocity in a given pipe all liquids of the same kinematic viscosity have equal loss of frictional head. Liquids of the same kinematic viscosity have equal Saybolt seconds. From this it follows that for

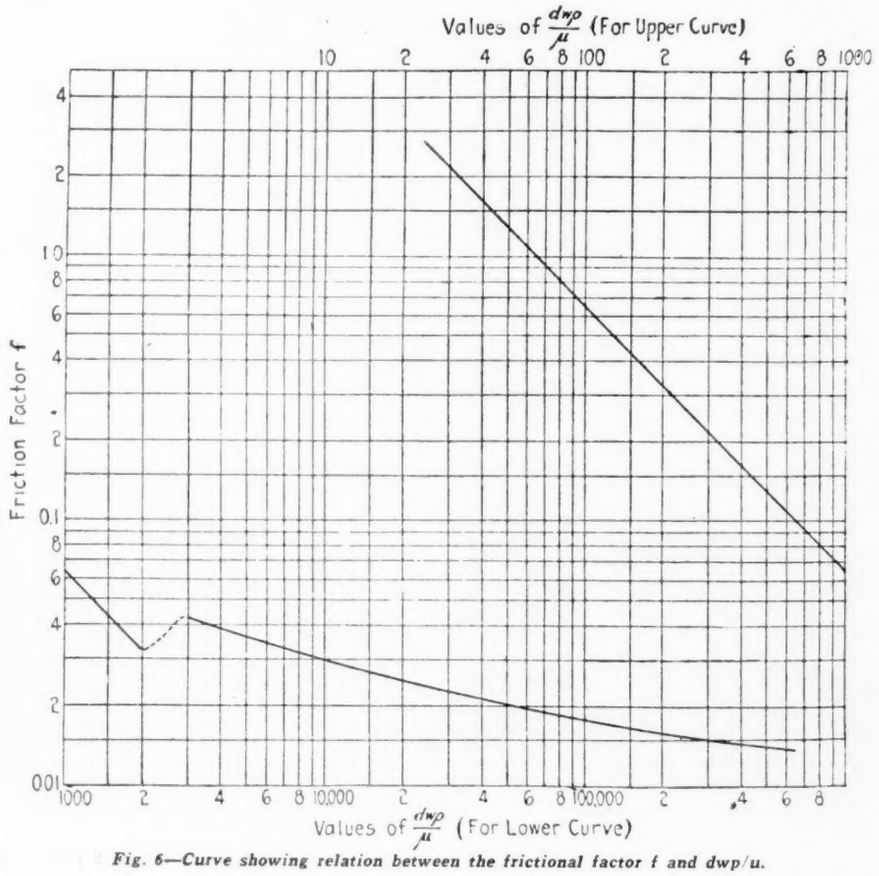

Values of $\frac{dwp}{\mu}$ (For Upper Curve)
10 2 4 6 8 100 2 4 6 8 1000
Friction Factor f
4 2 1.0 8 6 4 .2 0.1 8 6 4 2 0.01
1000 2 4 6 8 10,000 2 4 6 8 100,000 2 4 6 8
Values of $\frac{dwp}{\mu}$ (For Lower Curve)

Fig. 6—Curve showing relation between the frictional factor f and dwp/u.

[1] Mechanical Engineering, vol. 43, no. 9, p. 616.

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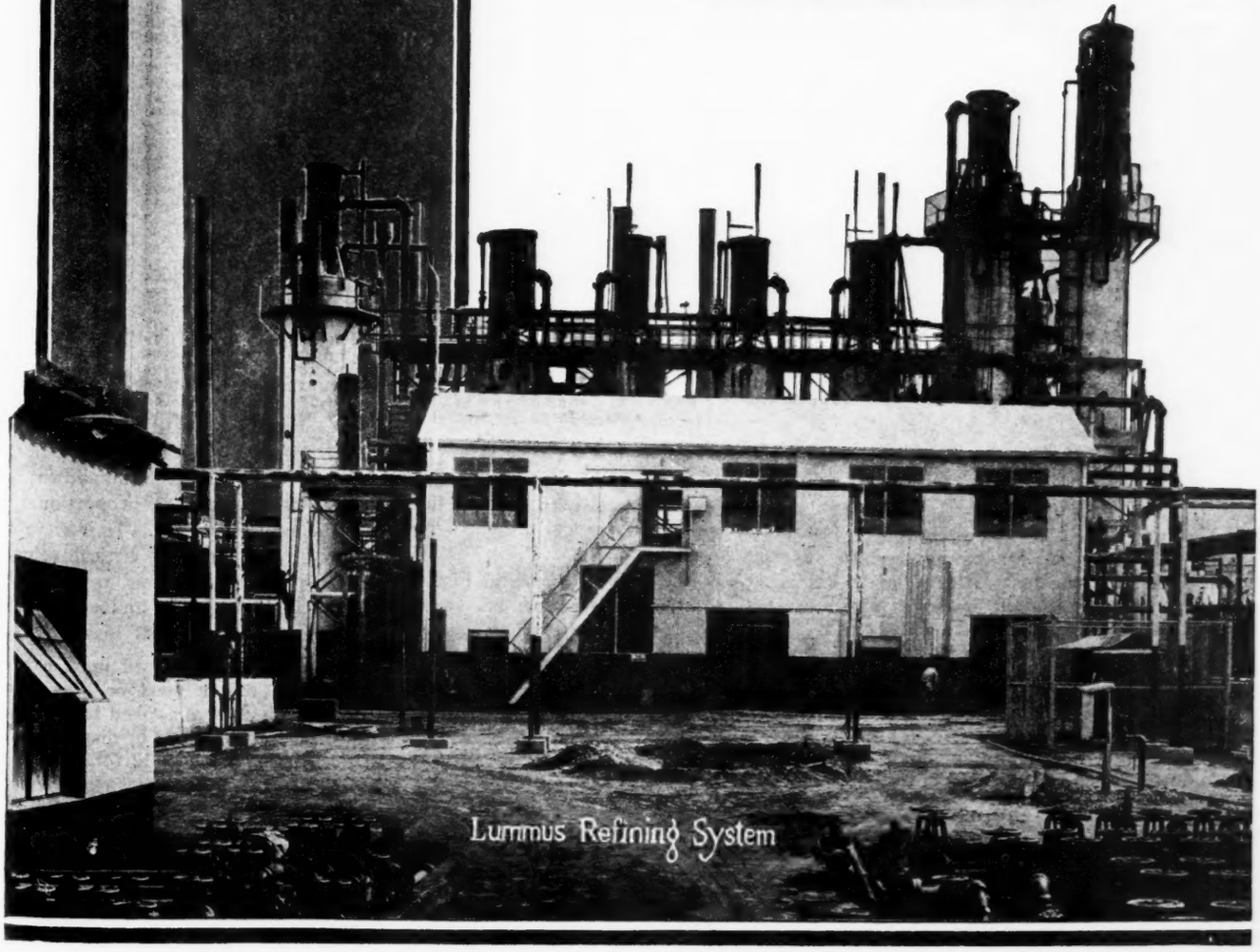

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flow at the same velocity in the same pipe, liquids of the same Saybolt viscosity have equal loss of frictional head. This fact is of great importance as it allows a determination of the kinematic viscosity from the viscosimeter readings and Fig. 5, by means of which, for any given flow velocity and pipe diameter, the frictional factor f may be computed.

As might have been expected, the curve of Fig. 6 consists of two branches, one for straight-line flow, and the other for turbulent flow. The branch for the straight-line flow is a straight line with a slope of 45 deg., and its intercept on the axis of ordinates is 64. The equation for this line is $f = 64 \div (dw/\mu)$. The other branch is curved and no practical mathematical expression is available. The value of the critical region is clearly seen, and it will be found that straight-line flow changes to uncertain flow at $dwp/\mu = 2000$, and then changes again to regular turbulent flow at $dwp/\mu = 3000$.

If μ = viscosity of main body of fluid, poundal-sec.
p = density of main body of fluid, lb. per cu. ft.
d = actual inside diam. of pipe, ft.
L = length of straight pipe, ft.
w = average velocity of fluid, ft. per sec.
h = pressure drop due to friction, ft., and
g = acceleration due to gravity = 32.2 ft. per sec. per sec.

then

$$h = \Phi \left(\frac{dwp}{\mu} \times \frac{L}{d} \times \frac{w^2}{2g} \right) \quad \ldots . [1]$$

corresponding to the Fanning equation:

$$h = f \times \frac{L}{d} \times \frac{w^2}{2g} \quad \ldots . [2]$$

which gives

$$f = \Phi \left(\frac{dwp}{\mu} \right)$$

Critical region:

$$2000 < \frac{dwp}{\mu} < 3000 \quad \ldots . [3]$$

If the frictional loss is to be expressed in pounds per square inch, multiply the above value of h by 0.433 and by the specific gravity of the fluid.

Allowance must be made for loss at bends and valves. Most engineering handbooks give the loss in terms of an equal length of straight piping. The equivalent lengths should be added to the straight length of the piping before finally deciding on the total loss, to make sure that this is not greater than permissible.

The method of computing the pressure drop or loss of head due to friction will then be:

1—To obtain the viscosity and density of the liquid at the required temperature.

2—If the obtained value is in Saybolt seconds, to convert these into kinematic viscosity μ/p by means of Fig. 5.

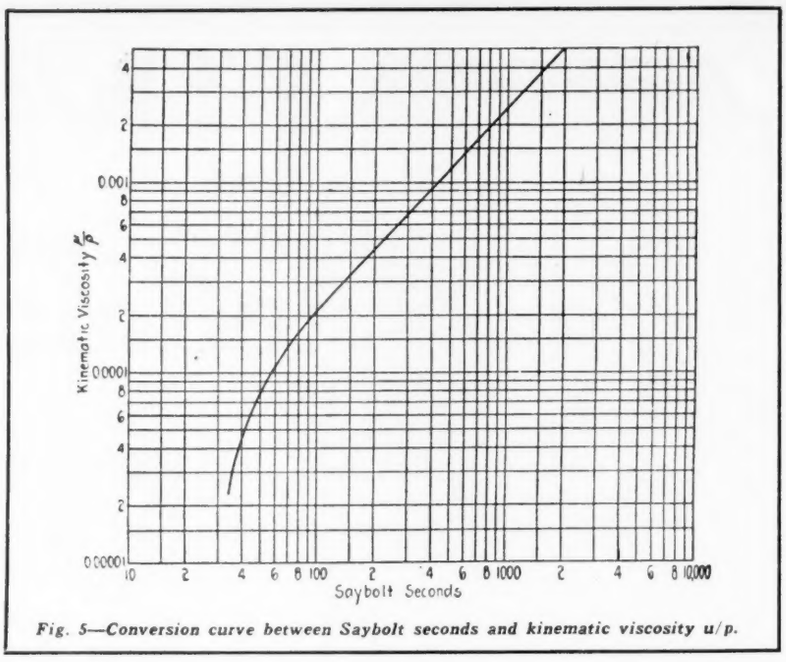


Fig. 5—Conversion curve between Saybolt seconds and kinematic viscosity u/p.

Table 3 Pressure Drop of Oil Flowing in Pipe—Friction Head in Ft. Per 100 Ft. of Pipe

Pipe diameter, in.	Oil velocity, ft. per sec.	Viscosity in Saybolt Seconds								
		50	100	150	200	300	400	500	600	800
1	2	2.60	6.38	10.00	13.60	20.70	27.70	34.60	41.50	55.50
	4	12.40	12.76	20.20	27.20	41.40	55.40	69.20	83.00	111.00
	6	25.00	26.00	30.30	40.80	62.10	83.10	103.80	124.50	166.50
	8	41.35	53.90	40.40	54.40	82.80	110.80	138.40	166.00	222.00
	10	61.40	79.10	75.16	68.00	103.50	138.50	173.00	207.50	277.50
2	2	1.53	1.60	2.50	3.38	5.14	6.88	8.60	10.34	13.78
	4	5.12	6.65	5.00	6.76	10.28	13.76	17.20	20.68	27.56
	6	10.40	13.42	15.12	11.81	15.42	20.64	25.80	31.02	41.34
	8	17.14	22.12	24.90	26.95	20.56	27.52	34.40	41.36	55.12
	10	25.20	32.85	37.10	40.00	36.73	34.40	43.00	51.70	68.90
3	2	0.74	0.64	1.00	1.32	2.04	2.72	3.40	4.08	5.44
	4	2.48	3.21	3.31	2.64	4.08	5.44	6.80	8.16	10.88
	6	5.48	7.09	7.95	8.60	6.35	8.50	10.62	12.75	17.00
	8	9.78	12.70	14.35	15.51	17.00	12.80	14.87	17.85	23.80
	10	15.15	19.85	22.10	24.05	26.90	27.30	21.50	22.95	30.60
4	2	0.64	0.83	0.64	0.84	1.28	1.72	2.16	2.60	3.44
	4	1.91	2.47	2.78	2.88	2.40	3.23	4.03	4.85	6.44
	6	3.84	5.00	5.67	6.10	6.46	4.85	6.04	7.28	9.65
	8	6.32	8.30	9.26	10.10	11.23	11.72	9.03	9.71	12.86
	10	9.35	12.15	13.70	14.78	16.57	17.85	17.70	14.70	16.07
6	2	0.37	0.48	0.53	0.41	0.56	0.75	0.94	1.12	1.48
	4	1.23	1.60	1.80	1.94	2.14	1.55	1.80	2.24	2.97
	6	2.72	3.54	3.98	4.30	4.80	5.16	5.05	4.28	4.69
	8	3.98	4.97	5.56	6.36	6.96	7.55	7.95	8.54	6.36
	10	5.90	7.14	8.07	9.00	9.93	10.85	11.79	12.40	12.40
8	2	0.24	0.31	0.36	0.39	0.30	0.39	0.56	0.60	0.86
	4	0.82	1.05	1.20	1.31	1.46	1.57	1.24	1.20	1.61
	6	1.68	2.10	2.35	2.60	2.94	3.11	3.36	3.52	2.78
	8	2.83	3.58	3.88	4.33	4.77	5.21	5.66	5.81	4.62
	10	3.97	5.36	5.83	6.30	7.00	7.46	8.16	8.39	9.32

3—Insert μ/p together with the assumed values of d and w in [3]. If the value is within the critical region, d or w must be changed.

4—Enter the value of dwp/μ in Fig. 6 to obtain the frictional factor.

5—Insert the value of f in [2] which will give the desired frictional loss.

Allowance for Rough Pipe

FOR rough or corroded pipe or where the fluid may decompose or deposit solid matter on the wall, an amount by which f must be increased should be determined. This can only be a matter of judgment in each particular case, as no definite method exists.

The formulas do not apply to heavy tar-like oils of very high viscosity, as these oils in some way behave more like solid matter. It has been shown that the critical velocity is proportional to the kinematic viscosity. If it were attempted to exceed the critical velocity for such heavy oils, this would result in very high pressures and correspondingly excessive frictional losses.

The formulas are based upon experiments with drawn steel or brass pipe. When the method is applied to wrought-iron pipe 1 to 6 inches in diameter, add to the frictional losses 12 to 3 per cent.

The viscosity of oil is greatly influenced by the temperature, as mentioned above.

Table 3 gives the pressure drop in pounds per square inch for different pipe diameters, different oil velocities, and different oil viscosities.

Show Most Efficient Piping Arrangement For Single Tank Bulk Station

By Paul Truesdell

N. P. N. Staff Writer

CLEVELAND, Aug. 30

BULK stations are the hubs from which radiate tens of thousands of tank truck and wagon routes that supply the daily gasoline and kerosene needs of the nation. Hardly a gallon of gasoline goes into the automobile owner's tank, nor a gallon of kerosene goes into the farmer's tractor or his evening lamp that has not passed through a bulk station of some sort. There are but few farms so lonely, remote and isolated, that the tank truck or wagon of some oil company does not drive up regularly to deliver the fluids which furnish power to the automobile, the tractor, the pumping engine, and light for the household lamps. Every one of these tank wagons comes from a bulk station. There are thousands of them over the country, ranging all the way from the small country station with a single tank containing from 12,000 to 20,000 gallons up to the big stations that supply the requirements of strings of city filling stations and have storage space ranging up to 1,000,000 gallons or more. There is the combined bulk and filling station, located on a railroad siding, where the proprietor unloads the gasoline and kerosene from the tank car into a storage tank in his back yard and pumps it into the tanks of the motoring public in his front yard. These last, of course, are much in the minority.

Offers Working Drawings

IN the case of the smaller companies, sometimes the design and construction of bulk stations offer a considerable problem, proved by the number of inquiries received by National Petroleum News as to piping layouts for bulk stations, sizes of pipe to use, method of connecting it up and so on. To offer helpful suggestions this publication consulted the engineering department of a large refining and marketing company that operates somewhere around 500 bulk stations of all sizes from the largest to the smallest. This company consented to give for publication its actual working drawings used in the construction of its own stations. These show with remarkable clearness just how to arrange the piping to get the best results in stations of various sizes.

This week, on the following pages, the working drawings for the piping layout of a single-tank station are shown. Of course, there are other efficient ways of piping a station. However, this drawing represents at least a good layout that has proven satisfactory in the experience of this company.

One question most frequently asked by inquirers is, what size of pipe should be used for the small bulk station. As the drawing shows, the size used by this company is 3-inch for the incoming lines, that is from the tank car unloading point to the storage tank, and 2½-inch for the lines within the plant. The reason for using larger pipe for the incoming lines is this. Usually the size of the pump used for such stations by the company under discussion, is a rotary with a capacity of 100 gallons a minute. The incoming line usually slopes from the tank car on the railroad siding to the bulk station. Thus, the pump operates with flooded suction and the aid of gravity gives it a capacity of somewhere around 10 gallons a minute more than it would have if the intake line were on a dead level and considerably more than that above the capacity if a suction lift were required. By using a slightly larger pipe and calling gravity to its aid, the company is able to increase the capacity of the pump considerably in unloading cars.

As the lines within the plant are almost entirely level, or require pumping against a gravity head, the rated capacity of the pumps can be realized through a smaller pipe and could not be increased through the use of larger pipe. It is cheaper to use 2½-inch pipe.

Setting the Storage Tank

IN the first place, the setting and piping of the storage tank itself will be considered. The manner in which this company sets its tanks is unusual and was described in the Mar. 5, 1924 issue of this paper, page 55. The tanks are set, vertically of course, on bases of crushed stone instead of concrete, as is the usual practice. The first step in setting a tank, according to this company's practice, is to dig a round hole 12 inches deep of the exact diameter of the tank, a tank of 20-foot diameter being commonly used. This hole is filled with good sized chunks of broken stone. A mound of finer crushed stone is heaped on top of this, reaching out a considerable distance beyond the circumference of the hole all around. This fine crushed stone is leveled off to make a platform 10 inches above the ground level and extending two feet beyond the tank wall on all sides. Around the edges the crushed stone is sloped off to the ground level. The tank is set directly in the center over the hole. Thus a crushed stone foundation 22 inches thick carries the entire weight of the tank, the banking of the stone around the edges being to prevent the washing away of material from under the tank.

A concrete box about 18 inches square with the top and front open is set into the circumference of the embankment, the top of the box flush with the level of the base on which the tank stands. The tank is so set that an outlet valve in the bottom projects down into this box. The box makes it easy to reach the valve and drain off the water that accumulates in the bottom of the tank.

Use Only One Line

ONE line serves for both pumping in and pumping out. As before stated, the inlet line is three-inch and the suction line from the tank car enters the bottom of the storage tank through a three-inch gate valve and a three-inch long threaded nipple which terminates inside the tank in a turned up three-inch ell, open at the top, of course. From the three-inch gate valve a short nipple leads to a three-inch by 2½-inch by half-inch tee, as shown in the drawing. The three-inch nipple is screwed into the three-inch end of the tee, a half-inch pipe leads upward from the half-inch opening and a 2½-inch line leads from the 2½-inch end of the tee into the station. The half-inch pipe leads up alongside the tank to the top and then, through a gooseneck, down through the roof to a point five feet above the bottom of the tank. One foot below the roof, inside the tank, the half-inch pipe is fitted with a half-inch tee, the outlet of which is left open.

When pressure builds up in the pipe on a hot day, it finds relief through the half-inch pipe. Vapors travel up the pipe and escape through the open tee into the vapor space. However, when a tank car is being unloaded into the tank, some of the gasoline finds its way up the pipe with the vapors. The latter escape through the tee but the heavier liquid goes on down the pipe and is discharged well below the surface of the oil, thereby making little disturbance.

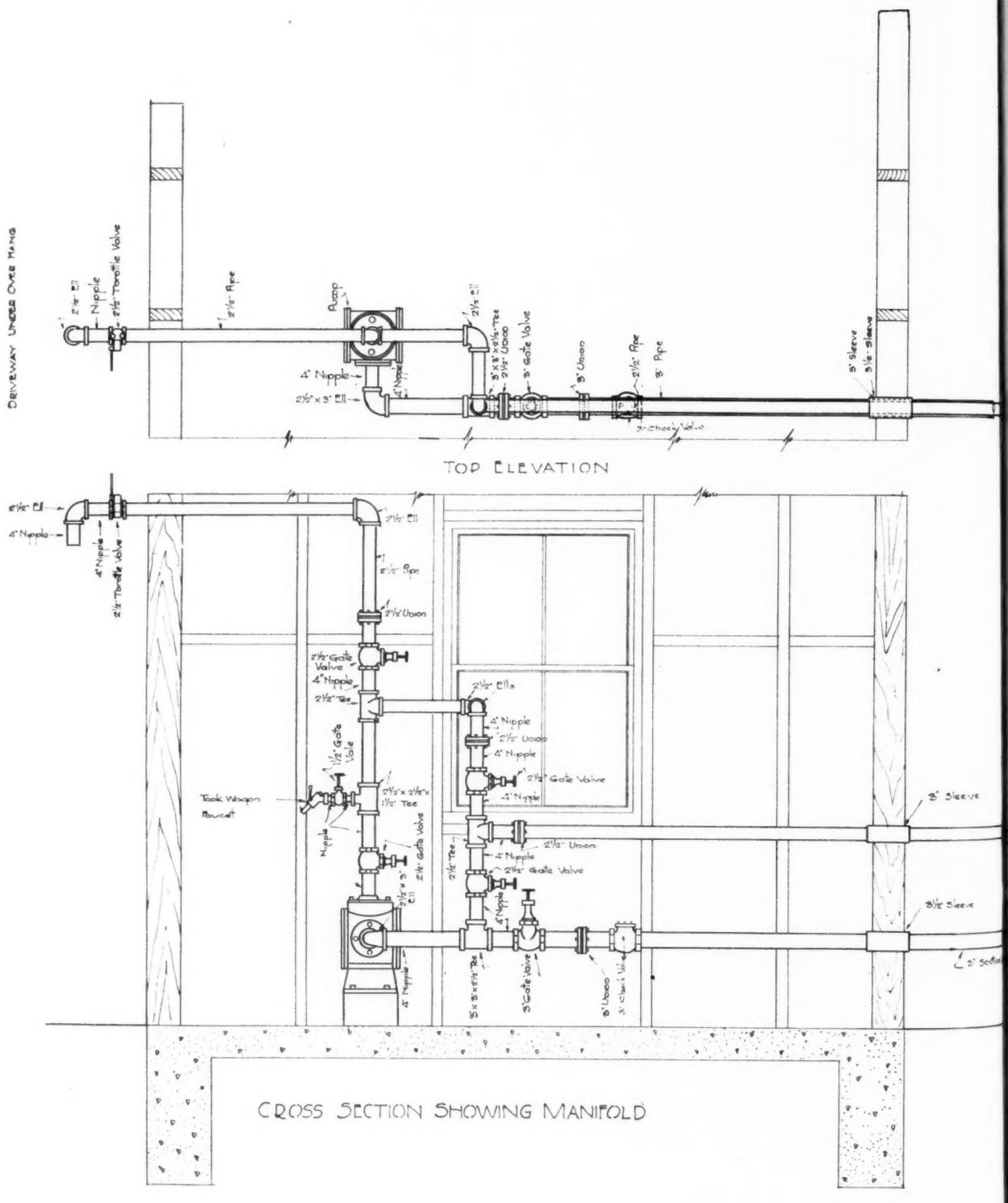
Distortion and breaking of the pipe through listing of the tank is prevented in this piping layout by the use of two 45-degree ells. They are installed just beyond (toward the station) the tee which carries the half-inch relief pipe. There is a nipple between them. These ells unscrew a thread or two, whatever is necessary to take up the strain.

The lines pass through the wall of the station to the pump through sleeves as shown.

The pumps used by this company are of rotary type, usually driven by gasoline engines, although sometimes an electric motor is used. However, the gasoline engine is considerably cheaper and has the advantage of using the company's own product.

Actual Working Drawing of Piping Layo Desig

Drawn by the Engineering Department of a large Marke pany and



Designed for a Single-Tank Bulk Station

...mpany and used in the construction of its own stations.

PCS.	SIZE	MATERIAL
2	2" X 1½"	Bushings
12	2½"	Ells
6	2½" 45°	"
2	2½" X 3"	"
4	3"	"
2	3" 45°	"
2	1½"	Tank Wagon Runoff
2	18"	Manhole Gasket
1	1¼x8"	Nipples
4	1½" x 4"	"
2	1½" x 6"	"
24	2½" x 4"	"
8	2½" x 6"	"
6	3" x 4"	"
4	3" x 6"	"
2	3" X 10"	Long Threaded Nipple
40'	1½"	Pipe
80'	2½"	"
1	3" x 2½"	Reducer
1	1½"	Tee
6	2½"	"
1	2½"	Cross Tee
2	2½" x 2½" x 1½"	Tee
1	3" x 2½" x 1½"	"
2	3" x 2½" x 2½"	"
4	3" x 3" x 2½"	"
2	2½"	Swing Joint "Bianco"
1	1½"	Union Hex.
8	2½"	Soft Flanged Unions drilled
2	3"	"
2	3"	Std. Flange Union "Screwed"
2	1½"	Gate Valve
10	2½"	"
2	2½"	Quick Closing Valves "Everlasting"
4	3"	Gate Valves
2	3"	Check "
2		Vent Valves
2		Water " + Casing + pipe 2½"x3"
	FOR 3 TANKS ADD TO ABOVE	
3	2½" 45°	Ells
1	3"	"
1	18"	Gasket
1	1½" x 8"	Nipple
8	2½" x 4"	"
1	3" x 4"	"
1	3" X 10"	" Long Threaded
40'	1½"	Pipe
1	1½"	Tee
1	3" x 2½" x 1½"	"
1	1½"	Union "Hex."
8	2½"	" Soft Flanged
2	2½"	Gate Valve
1	3"	"
1		Vent Valve
1		Water Valve + Casing

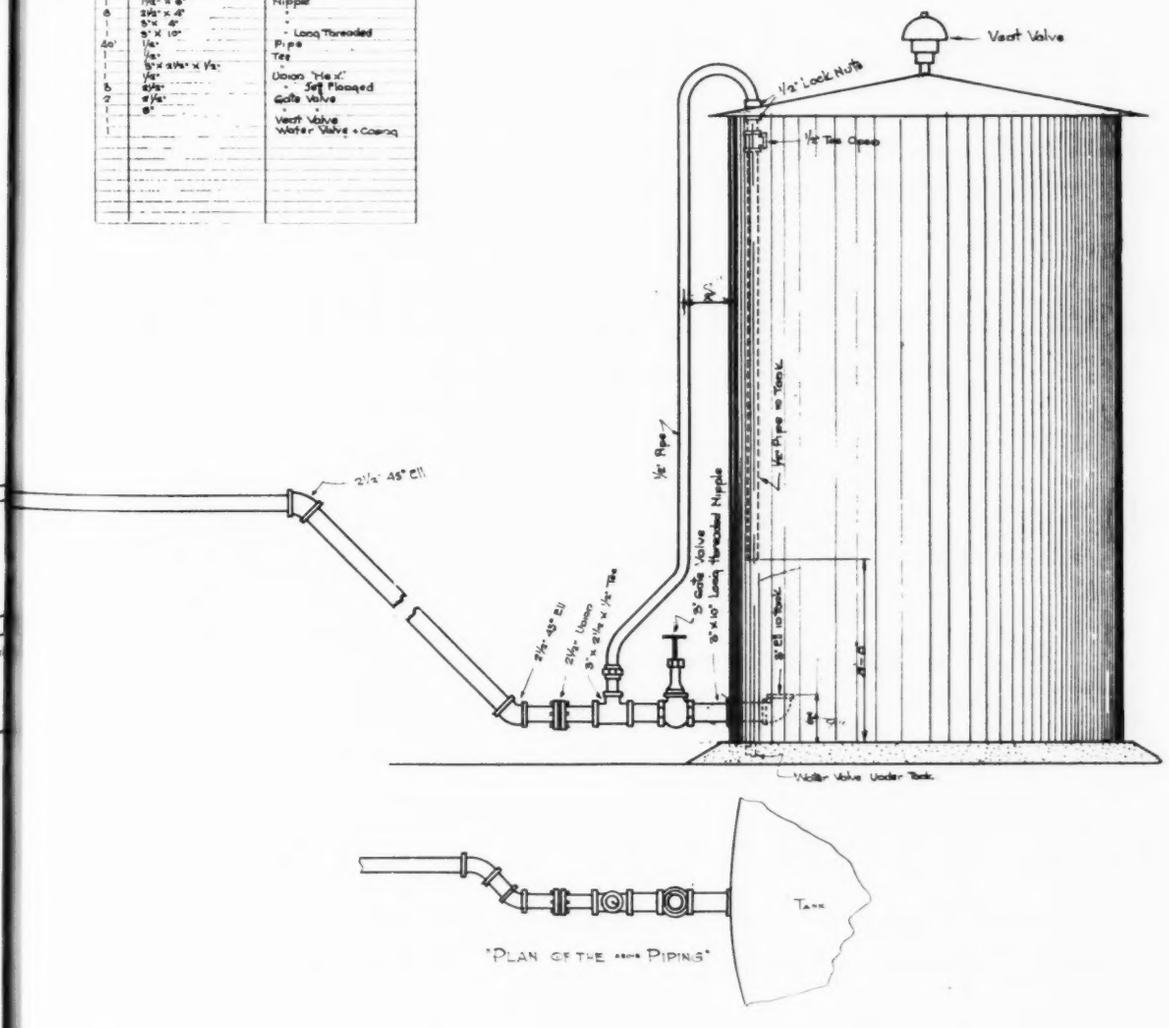


Fig. 106

Screwed, Jenkins Standard Bronze Globe Valve

Fig. 325.

Screw d, Jenkins Standard Iron Body Gate Valve.

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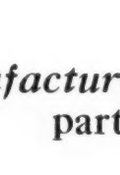

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Fire Fighting Equipment for Small Bulk and Service Stations

By Charles H. Haupt
Chief Engineer, Standard Oil Co. of New Jersey

"WHAT type of fire extinguishers shall I buy; how many and where shall I put them?"

These are questions that every oil marketer asks himself at one time or other. Sometimes his fire insurance agent may answer them; sometimes the local fire chief may make the proper recommendations, but oftentimes neither has specific knowledge of just what provides the best protection for oil stations.

Mr. Haupt, the chief engineer for the largest oil organization in the world, has written for the benefit of National Petroleum News readers a brief sketch of what is considered good fire protection practice at small stations. By following these recommendations oil men and their employes may quickly extinguish most fires before they gain headway.

For those who wish a more detailed and technical guide to fire extinguishers, there is "First Aid Fire Appliances," a booklet published by the National Fire Board of Fire Underwriters which embodies the recommendations of the National Fire Protection Association. This booklet is especially recommended by Frank A. Epps, manager, fire protection department, Tide Water Oil Co., a foremost student of oil fires.—EDITOR.

THE following outline is given as a recommendation for the selection and location of hand extinguishers about small sales stations and service stations. It is not intended to cover the protection of oil tanks, or to cover special risks, such as large repair shops for automobiles, paint shops, cooperage departments, etc., which facilities are a part of the largest saes stations only. The larger sales stations should be covered as a special consideration and recommendations made concerning them after a thorough inspection has been made.

Service stations are usually protected according to their size by one or two foam type extinguishers and an equal number of the one-quart hand pumped carbon tetrachloride type. The carbon tetrachloride type are usually mounted on the gasoline pump and the foam type are kept conveniently located on the curb near the pump.

The foam type extinguishers must be kept in a warm place in freezing weather to prevent freezing of the solution. It is the practice also to keep a galvanized barrel about two-thirds full of dry sand provided with a small hand scoop for spreading the sand.

Equipment Located Conveniently

IN each case where extinguisher equipment is recommended it should be located at a convenient point, preferably near the door, or where it will be accessible in case of emergency. Also, the foam and soda-acid type extinguishers must be protected from freezing. The carbon tetrachloride type extinguisher is not affected by cold weather. In each case where a foam extinguisher is mentioned the 2½ gallon foam type is referred to; when a soda-acid extinguisher is mentioned the 2½ gallon soda-acid type is referred to, and when the carbon tetrachloride type is mentioned the one-quart hand pumped carbon tetrachloride extinguisher is intended. All of these extinguishers are approved by the Underwriters Laboratories.

Each pump house at bulk stations should be equipped with at least one foam extinguisher and possibly supplemented by an additional carbon tetrachloride type extinguisher.

Each boiler room should have one foam type extinguisher if there is not one readily available in an adjoining pump room.

A loading rack should be provided with one carbon tetrachloride type extinguisher and also it would be well to have a half barrel of dry sand, equipped with a scoop for spreading same.

Extinguishers in Warehouse

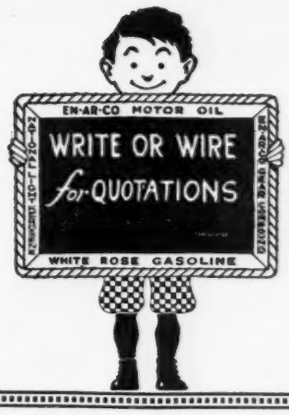
FOAM extinguishers should be located throughout the warehouse at convenient points on each floor and so situated that they will not be more than 75 feet apart. In the smaller warehouses this recommendation would call for the installation of but one extinguisher per floor.

In larger warehouses it is sometimes the practice to locate three or more extinguishers at a convenient point in the office to protect them from freezing. They are also, in this position, readily available for the office employees to carry to the scene of a fire. Where there is a large detached office it can be protected by soda-acid type or carbon tetrachloride extinguishers located not more than 75 feet apart.

Each garage should be provided with at least one foam type extinguisher. Where the garages are of considerable size it would be well to install the extinguishers, in general, according to the distance schedule given above.

Protection in Stables

WHERE stables are still in service, we would recommend the installation of a soda-acid type extinguisher on



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NATIONAL
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THREE MODERN REFINERIES:
Marietta, Ohio Refinery
operated on Pennsylvania Crude
Findlay, Ohio Refinery
operated on Ohio Crude
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National Headquarters
NATIONAL BLDG., CLEVELAND, O.

"CUT OIL"
is a problem in
CHEMISTRY

An "emulsion" represents a condition of a liquid which can be fully, scientifically and economically corrected by use of the chemical process Use TRET-O-LITE process when you have cut oil and tank bottoms that require treating

Wm. S. Barnickel & Co.
St. Louis, Mo

Tret-O-litE
Reg. U. S. Pat. Off

"Tight As A Drum"

When you screw down the plugs of a Hackney Drum you know that nothing is going to get in—or out.

Just take a look at this drum. Notice the two raised head openings. No water or dirt can get into the drum contents through them, even when the plugs are loose. The only way water can lick this construction is to flow up hill—and you know that would be a little out of the ordinary.

Now look at the head chime. The head is formed with a downward flange fitting into the slightly recessed chime and dip-brazed in it, so that the contact area is much larger than any obtainable by welding.

And notice the integral reinforcing hoops. They are pressed into the body. They can't work loose. This feature makes this tight drum strong.

If you would like to know more about this Hackney Drum that is "tight as a drum"—or any other Hackney Drum, write to—

Hackney Products

THE HACKNEY SEAMLESS BARREL is the ideal container for continuous service. The body is pressed from a solid sheet of steel. Absolutely no chance for leakage there. And the absence of seams means extraordinary long service.

THE HACKNEY TWO-PIECE DRUM is made from two solid pieces of sheet steel. The only seam is circumferential. The chimes and heads are integral with the body. Two I-Bar hoops provide additional rigidity and strength and make rolling easy.

THE PRESSED STEEL TANK CO.

1141 Continental Bank Bldg., Chicago

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Hackney

MILWAUKEE

the lower floor, and also one on the upper floor if it is used for storage of hay or feed. It may be advisable also to install on this upper floor a water barrel with a suitable pail.

Each can repair shop should be provided with one carbon tetrachloride type extinguisher.

All filling rooms should have at least one foam type or carbon tetrachloride extinguisher, and where there is more than one man employed, it would be well to increase the equipment accordingly.

In addition to the above, the larger stations, where practically all this type of construction is encountered, should have at least one 40-gallon foam engine.

The foregoing outline is a recommended good practice for the protection of service and bulk stations and covers virtually all risks which are met in this type of construction.

Auto Laundry Describes Facilities in Booklet

CHICAGO, Aug. 30.—The advantages, importance and operation of an auto washing system are set forth in a 24 page booklet just published by the Klean-Rite Auto Laundry Co. of this city.

Believing that the public wants its cars clean and is willing to spend money to make them so, the company started in business less than two years ago and is now operating about 150 of these plants throughout the country.

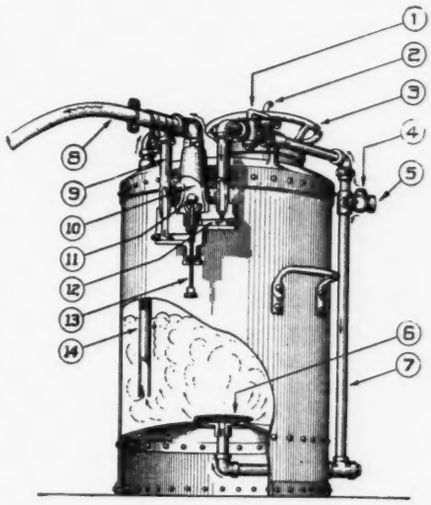
These car washing systems are installed mostly at filling stations, garages, and at automobile and accessory dealers' locations. Some of the advantages of the Klean-Rite auto laundry are that it does not require skilled labor to operate; it is a business-builder for other lines, such as polishing, simonizing, lacquer-finishing, re-filling oil and gasoline, greasing, tire and battery service, etc.; it is a cash business and is not a large investment. Franchises are given exclusively for a designated territory.

Departments are maintained by the company for the service of its customers and include advertising, purchasing, drafting, sales promotion and instruction. The drafting department will furnish customers with complete layouts for super service stations to fit the location. Specifications for model plants are included in the booklet.

Other merchandising ideas are suggested, such as the job ticket and follow-up system, which is illustrated in the booklet.

CHICAGO, Aug. 6.—More than 100 jobbers attended the convention held by J. J. Theisen of the Theisen-Clemens Co., at St. Joseph, Mich., Thursday and Friday, Aug. 5 and 6. It was a social, rather than an industrial, assembly. In fact it was an invitation affair. The gathering consisted of Michigan jobbers and customers of Mr. Theisen. The group enjoyed golf and a banquet together. Prizes were awarded winners at golf.

The DUNN PAINTING MACHINE
and the Dunn Process



Explanation of Illustration

1. Air shut-off valve. 2. Bleed cock. 3. Filling cap. 4. Special 3-way air inlet valve. 5. Air hose connection. 6. Agitator. 7. Air line to agitator. 8. Atomized paint hose. 9-14. Paint feed line. 10. Atomizer. 11-13. Atomizing ball and paint supply control. 12. Air line to atomizer.

—give greater economy in all painting problems. Hundreds of industrial plants including oil companies have solved their painting problems with Dunns.

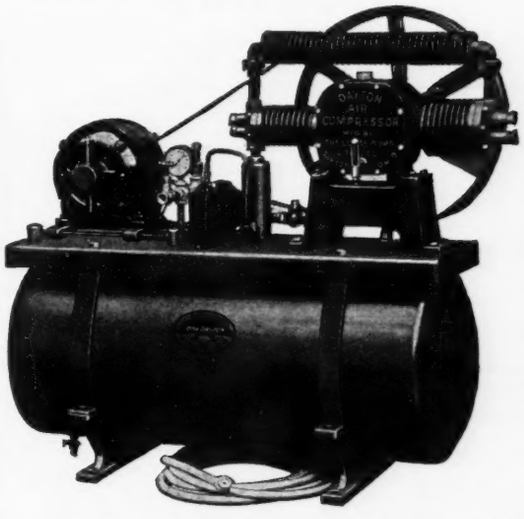
In the oil industry one Dunn and an operator will do the work of from 8 to 15 men with a brush, plus a better job and less paint. It will handle the heaviest paints without thinning and apply them to the surface in the exact proportions as mixed, whether the job be on tanks, cars, buildings or in the shop or garage. Fool-proof in operation—no up-keep expense. Their life is indefinite. The first Dunns sold eight years ago are still in use.

Complete descriptive matter is yours for the asking.

DUNN PAINTING MACHINE COMPANY
833 Howard Street - - - - San Francisco, California

FAME IS NOT ACCIDENTAL—

There is always a reason for popularity. Dayton Air Compressor fame is due to the fact that they are seldom out of order, due to their simplicity. Fewest parts insure reliable service and, besides, Daytons are built to stand the racket.



No Connecting Rods or rod bolts—

No Cross-head pin or cotter pin—

Automatic release and control; automatic spring tension Take-Up on belt.

New self-aligning bearing which cannot come out and on which wear is minimized.

25 styles—7 types

THIS IS "STYLE G"—TWO STAGE

The LUCAS PUMP & TOOL COMPANY DAYTON, OHIO.
DAYTON AIR COMPRESSORS

425 Valley Street **Dayton, Ohio**

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RANNEY OIL MINING COMPANY

Leo Ranney, *President*

Oil Mine Engineers

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Chemical Engineer
Consulting Petroleum Technologist
Inventor Gomory Cracking Process
Licenses Solicited
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PETROLEUM GEOLOGISTS AND ENGINEERS

Frick Building PITTSBURGH, PA.

PROFESSIONAL advertising keeps your name constantly before the industry you are engaged in. When the readers of *National Petroleum News* want professional services they will naturally turn to this directory.

THE COST IS SMALL

1-inch card $25 a quarter in advance—$100 a year for 26 issues. 2-inch card $50 a quarter in advance—$200 a year for 26 issues. Larger space increases proportionately. Single insertion rate $5.

National Petroleum News

802 Caxton Bldg., Cleveland, O.

List of Osage Tracts to be Sold Includes 12 Near Burbank

Staff Special
TULSA, Aug. 30.

LISTS showing tracts to be offered for bids at the sale of Osage leases to be held Sept. 30 are now available. The sale will be held at Pawhuska, capital of the Osage nation, beginning at 10 A. M. on the day mentioned.

The list includes 127 tracts on the east side, which includes that part of the Osage lying east of Range 7, comprising 20,320 acres, and 96 tracts on the west side, or west of range 8, comprising 15,260.72 acres. The west side tracts include 12 quarter-sections in the vicinity of the Burbank field, some of which are now offset by recently-completed producing wells, and it is likely that these tracts will bring the liveliest bidding. A number of other tracts, on the east side as well as on the west, are offsetting or close to production, and should bring good prices.

Following is the official list of tracts to be sold, as announced by the Bureau of ndian Affairs of the Interior department, Washington:

WEST SIDE

(To Be Offered West of Range 8)

Tr. No.	Description	Acreage
128	Fr. N. 1-2 33-22- 7	113.80
129	SE 33-22- 7	160
130	Fr. SW 33-22- 7	106.92
131	NE 24-23- 7	160
132	SE 24-23- 7	160
133	NE 22-25- 7	160
134	NW 22-25- 7	160
135	SE 22-25- 7	160
136	SW 22-25- 7	160
137	NE 35-25- 7	160
138	NW 35-25- 7	160
139	SE 35-25- 7	160
140	SW 35-25- 7	160
141	NE 24-26- 7	160
142	NW 24-26- 7	160
143	SE 24-26- 7	160
144	SW 24-26- 7	160
145	NW 29-26- 7	160
146	NE 30-26- 7	160
147	SE 30-26- 7	160
148	SE 22-27- 7	160
149	SW 22-27- 7	160
150	NE 27-27- 7	160
151	NW 27-27- 7	160
152	SE 15-28- 7	160
153	SW 15-28- 7	160
154	NE 22-28- 7	160
155	NW 22-28- 7	160
156	NE 13-23- 6	160
157	NW 13-23- 6	160
158	SE 13-23- 6	160
159	SW 13-23- 6	160
160	NE 21-23- 6	160
161	NW 21-23- 6	160
162	SE 21-23- 6	160
163	SW 21-23- 6	160
164	NE 4-24- 6	160
165	NW 4-24- 6	160
166	SE 4-24- 6	160
167	SW 4-24- 6	160
168	NE 19-25- 6	160
169	NW 19-25- 6	160
170	SE 19-25- 6	160
171	SW 19-25- 6	160
172	NE 21-25- 6	160
173	NW 22-25- 6	160
174	SW 22-25- 6	160
175	NW 27-25- 6	160
176	NW 20-26- 6	160
177	SW 20-26- 6	160
178	SW 22-26- 6	160
179	NE 28-26- 6	160
180	NW 28-26- 6	160
181	NE 29-26- 6	160
182	NE 7-27- 6	160
183	NW 7-27- 6	160
184	NW 13-27- 6	160
185	SE 13-27- 6	160
186	SE 4-28- 6	160
187	SW 4-28- 6	160
188	NE 9-28- 6	160
189	NW 9-28- 6	160
190	NE 5-25- 5	160
191	NW 5-25- 5	160
192	SE 5-25- 5	160
193	SW 5-25- 5	160
194	NW 1-27- 5	160
195	SE 1-27- 5	160
196	NE 13-28- 5	160
197	NW 13-28- 5	160
198	SE 13-28- 5	160
199	SW 13-28- 5	160
200	NE 9-23- 4	160
201	NW 9-23- 4	160
202	SE 9-23- 4	160
203	SW 9-23- 4	160
204	NE 1-24- 4	160
205	NW 1-24- 4	160
206	SE 1-24- 4	160
207	SW 1-24- 4	160
208	NE 23-25- 4	160
209	NW 23-25- 4	160
210	SE 23-25- 4	160
211	SW 23-25- 4	160
212	NE 32-25- 4	160
213	NW 32-25- 4	160
214	SE 32-25- 4	160
215	SW 32-25- 4	160
216	NE 26-26- 4	160
217	NW 26-26- 4	160
218	SE 26-26- 4	160
219	SW 26-26- 4	160
220	NE 31-26- 4	160
221	NW 31-26- 4	160
222	SE 31-26- 4	160
223	SW 31-26- 4	160
TOTAL		15,260.72

EAST SIDE

TRACTS 1 TO 223

(Will be offered for sale Thursday, September 30, 1926. Description of land to be offered East of Range 7.)

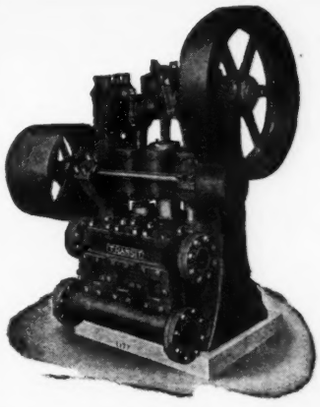
Tr. No.	Description	Acreage
1	SE 18-20-12	160
2	SE 28-22-12	160
3	SW 28-22-12	160
4	NE 32-22-12	160
5	NW 3 -23-12	160
6	NE 4 -23-12	160
7	NW 31-25-12	160
8	SE 12-20-11	160
9	SW 12-20-11	160
10	NW 13-20-11	160
11	NW 27-20-11	160
12	SW 28-20-11	160
13	NE 9 -21-11	160
14	NW 10-21-11	160
15	NE 23-21-11	160
16	NW 23-21-11	160
17	SE 17-22-11	160
18	SE 23-22-11	160
19	NE 25-22-11	160
20	SE 25-22-11	160
21	NE 32-22-11	160
22	NW 32-22-11	160
23	NE 32-26-11	160
24	SE 10-27-11	160
25	SW 14-27-11	160
26	SW 26-27-11	160
27	NE 18-28-11	160
28	NW 22-28-11	160
29	SE 22-28-11	160
30	NW 26-28-11	160
31	SW 13-20-10	160
32	SE 14-20-10	160
33	SW 14-20-10	160
34	NW 23-20-10	160
35	SW 23-20-10	160
36	NE 26-20-10	160
37	NW 26-20-10	160
38	NE 32-20-10	160
39	NW 33-20-10	160
40	NE 12-21-10	160
41	SE 12-21-10	160
42	NE 27-21-10	160
43	NE 33-21-10	160
44	SE 36-21-10	160
45	SW 36-21-10	160
46	NW 7 -22-10	160
47	NE 7 -23-10	160

Tr. No.	Description	Acreage
48	SE 7 -23-10	160
49	NE 11-23-10	160
50	SW 13-23-10	160
51	SE 31-23-10	160
52	NE 33-23-10	160
53	SE 33-23-10	160
54	SE 31-24-10	160
55	SW 32-24-10	160
56	NE 11-25-10	160
57	NW 12-25-10	160
58	NE 20-27-10	160
59	SW 20-27-10	160
60	SW 2 -20 -9	160
61	NE 16-21 -9	160
62	SE 28-21 -9	160
63	SE 10-22 -9	160
64	SW 10-22 -9	160
65	NE 12-22 -9	160
66	NW 23-22 -9	160
67	SE 26-22 -9	160
68	SE 27-22 -9	160
69	NW 34-23 -9	160
70	NW 35-23 -9	160
71	SW 17-25 -9	160
72	NE 19-25 -9	160
73	NW 20-25 -9	160
74	SE 27-25 -9	160
75	NE 30-25 -9	160
76	NW 33-25 -9	160
77	NE 34-25 -9	160
78	NE 7 -27 -9	160
79	NW 8 -27 -9	160
80	SW 8 -27 -9	160
81	NW 15-27 -9	160
82	NE 16-27 -9	160
83	NE 23-27 -9	160
84	NW 23-27 -9	160
85	NW 35-27 -9	160
86	NW 12-28 -9	160
87	NE 21-28 -9	160
88	SE 30-28 -9	160
89	NE 31-28 -9	160
90	NE 35-28 -9	160
91	SW 36-28 -9	160
92	SE 14-21 -8	160
93	SW 14-21 -8	160
94	NE 15-21 -8	160
95	SE 3 -24 -8	160
96	SW 3 -24 -8	160
97	NW 11-24 -8	160
98	NW 13-24 -8	160
99	NE 18-24 -8	160
100	NW 18-24 -8	160
101	SW 20-24 -8	160
102	NE 5 -25 -8	160
103	NW 5 -25 -8	160
104	NW 9 -25 -8	160
105	NW 12-25 -8	160
106	NW 26-25 -8	160
107	NE 27-25 -8	160
108	SE 32-25 -8	160
109	SW 33-25 -8	160
110	NE 9 -26 -8	160
111	NW 9 -26 -8	160
112	SE 15-26 -8	160
113	SW 15-26 -8	160
114	SE 25-26 -8	160
115	NE 27-26 -8	160
116	NW 27-26 -8	160
117	NW 36-26 -8	160
118	NE 2 -27 -8	160
119	SE 2 -27 -8	160
120	NE 15-27 -8	160
121	NW 15-27 -8	160
122	SE 23-27 -8	160
123	SE 25-27 -8	160
124	SE 32-27 -8	160
125	SW 32-27 -8	160
126	NE 30-28 -8	160
127	SE 30-28 -8	160
TOTAL		20,320

Graham Bros. Has New 2-Ton Truck

CLEVELAND, O., Aug. 30.—Two new two-ton trucks have just been developed by Graham Bros., and placed on the market by Dodge Bros. dealers. These two trucks are made in two lengths only, the shorter for nine-foot bodies having a wheel base of 137 inches and the longer, for 12-foot bodies having a wheel base of 162 inches. The new chassis will be supplied with a variety of bodies for various requirements.

Pneumatic tires are used, with either single or dual rears optional.



TRANSIT
Refinery
PUMPS

Bulletins on Request.

National Transit Pump & Machine Co.

OIL CITY, PA.

District Offices: New York, Philadelphia, Tulsa, Cleveland, Pittsburgh, Houston and Denver.

"Of all the recent books on gasoline, this is unquestionably one of the best"

GASOLINE FACTS

by H. G. MENDELSON

—a new book—gives you a wealth of information on all phases of the gasoline and oil industry

Not only the most recent and complete review of the gasoline industry but also one of the simplest and most readable stories ever written on the subject—is the consensus of opinion about this new book by a recognized authority.

Many volumes, most of them written from a technical viewpoint, have appeared on the subject of gasoline, the sources of its supply, the various refining processes, and its distribution. Now this author (born and raised in the oil fields) has produced a readable and truthful story, as interesting to the layman as it is to the expert.

"Gasoline Facts" is an education in itself —163 pages of facts on all branches of the industry—absorbing from beginning to end. If you buy, sell, handle, use or make gasoline, a copy should be in your hands now.

Hundreds have already taken advantage of our special offer. You may buy a copy of this special, limited "Roycroft Press" edition through your bookstore, or order direct from the publishers.

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The National Tank Auditing Service
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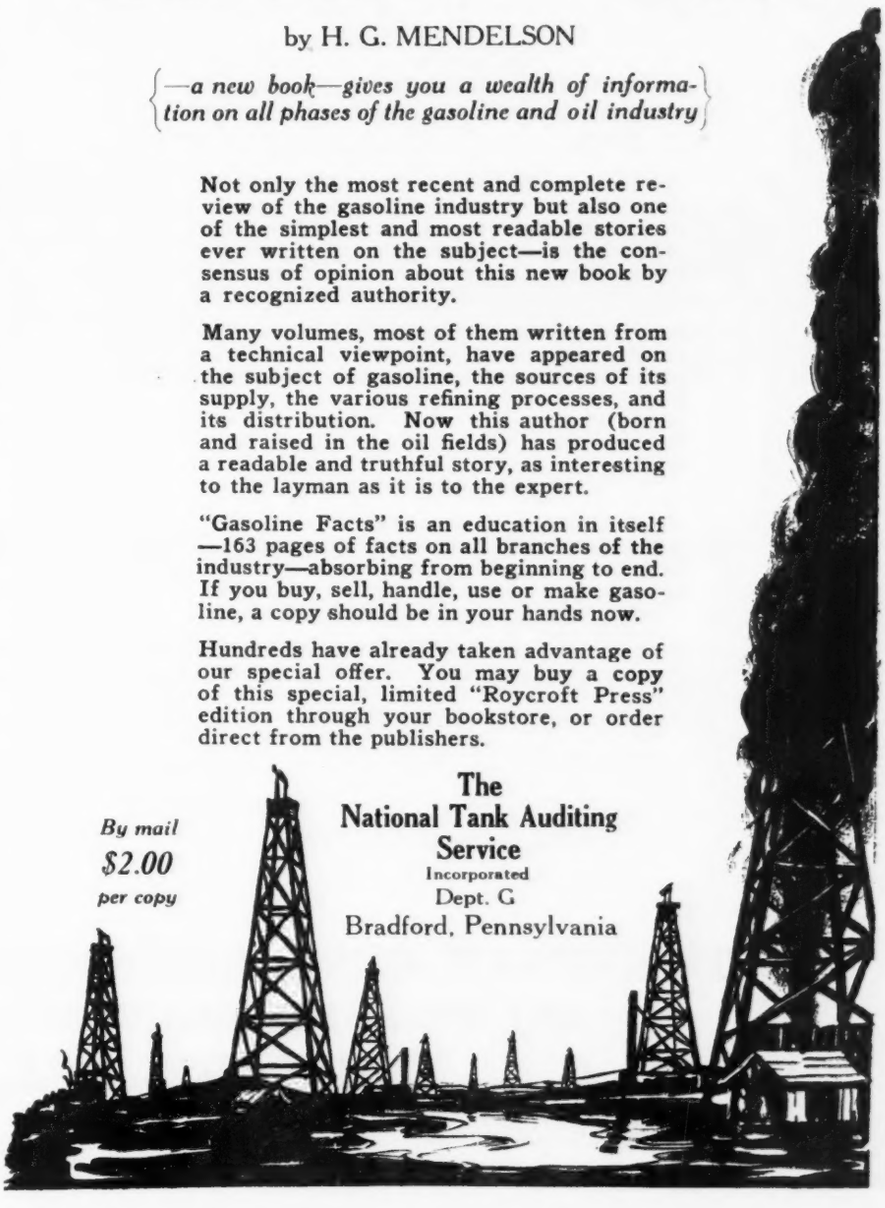
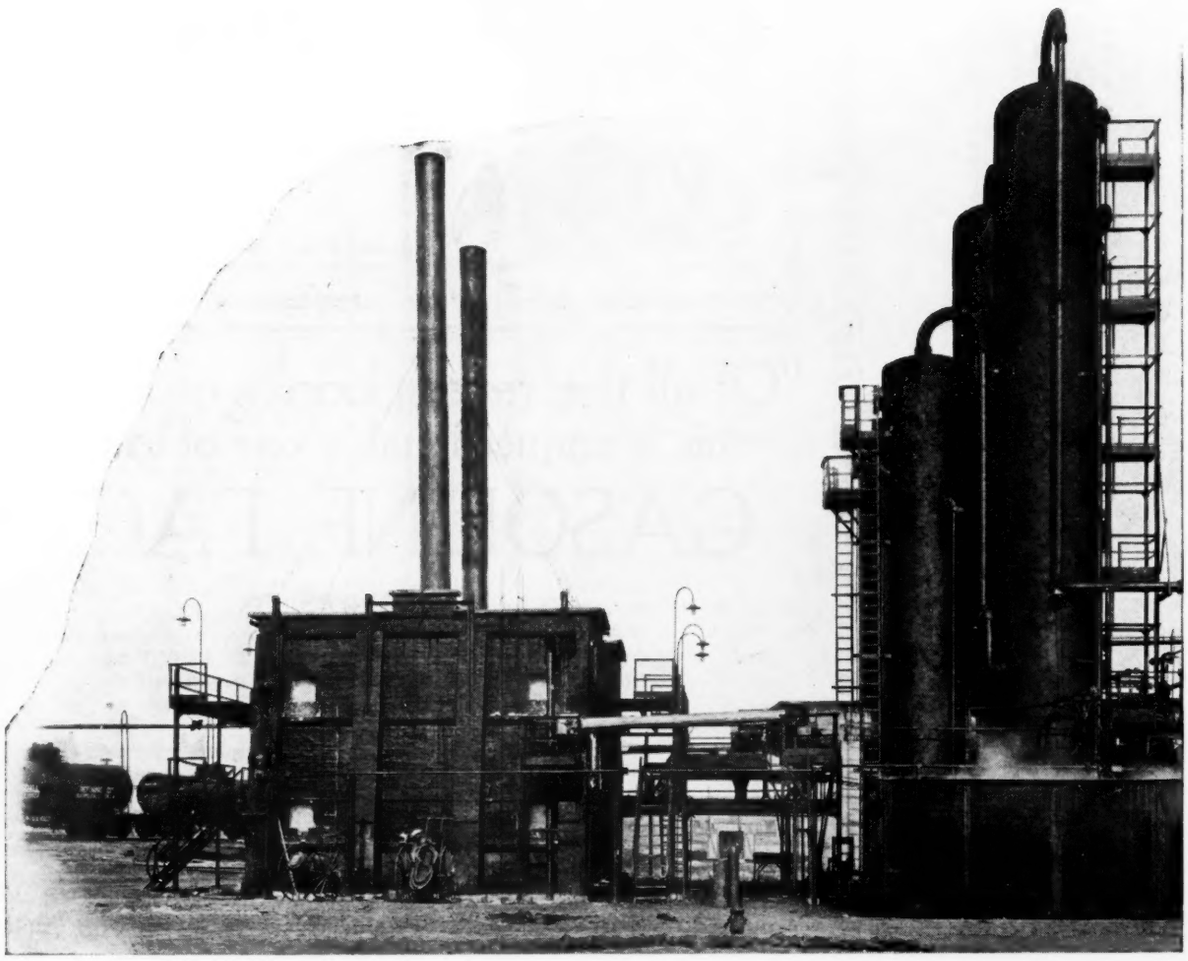




Cross Cracking Units (above) directly connected with—

Vapor Phase Refining Is Now Being Used

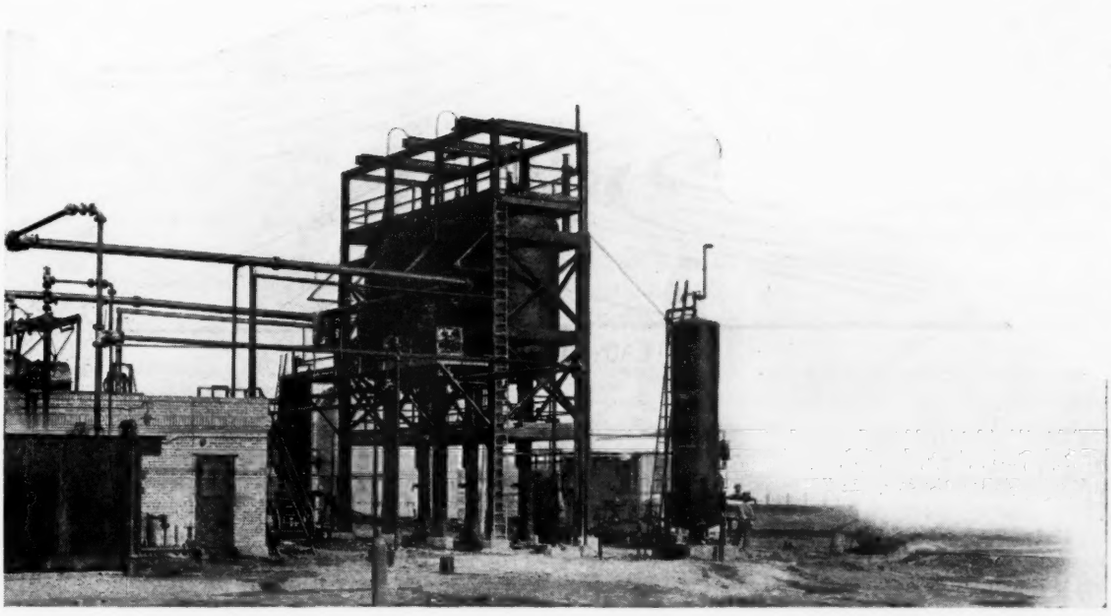
Argentine Government Oil Fields, Inc., La Plata, Argentine
Barnsdall Refineries, Inc., Barnsdall, Oklahoma
Barnsdall Refineries, Inc., Okmulgee, Oklahoma
Compagnie Belge du Gaz Catalytique, Brussels, Belgium
Kanotex Refining Company, Arkansas City, Kansas
Lubrite Refining Company, East St. Louis, Illinois

THE GRAY PROCESSES CORPORATION

961-975 FRELINGHUYSEN AVENUE

NEWARK, N. J.

Vapor Phase Refining delivers the full yield of gasoline produced in the cracking process, as a refined product of superior quality.



Gray Polymerizers (above)

or Installed by the Following Companies

Marland Refining Company, Ponca City, Oklahoma
McColl Bros. Ltd., Toronto, Ontario
Standard Oil Company of New York, Brooklyn, New York
Sun Oil Company, Marcus Hook, Pennsylvania
Vacuum Oil Company, Paulsboro, N. J.
White Star Refining Company, Wood River, Illinois

THE GRAY PROCESSES CORPORATION
961-975 FRELINGHUYSEN AVENUE
NEWARK, N. J.

STEADY, ALL HANDS

First Aid Training Schedule Revised

BARTLESVILLE, Aug. 30.—The Petroleum Experiment Station, U. S. Bureau of Mines, Bartlesville, Oklahoma announces the following revised schedule of First-Aid Training classes, that are being conducted by the personnel of Training Car No. 6, at refineries and in the oil fields of Oklahoma:

Ponca City, Aug. 16-Aug. 28.
Garber Field, Aug. 30-Sept. 4.
Tonkawa Field, Sept. 6-Sept. 11.
Burbank Field, Sept. 13-Sept. 18.
Barnsdall, Sept. 20-Sept. 25.
Avant, Sept. 27-Oct. 2.
Tulsa, Oct. 4-Oct. 9.
Sand Springs, Oct. 11-Oct. 16.

Upon the completion of this schedule, Car 6 will probably visit Yale, Cushing, Drumright, Kiefer, Okmulgee, Boynton, Cromwell Field and Oklahoma City. A definite schedule will be sent out soon giving dates of training at these places.

The Bureau of Mines will gladly arrange for training in any other places in Oklahoma if the Bartlesville Station is notified at once.

Early in the present year a letter in regard to the itinerary of Car 6 was addressed by the Bartlesville Station to the petroleum industry of the Mid-Continent. This letter pointed out that advice would be given if revisions in the car's schedule, to meet changed conditions, were made from time to time as the training progressed. In general, the original schedule has been followed, but additional training at various places has been requested and given. Where changes have occurred, the Bureau has endeavored to advise the industry in ample time.

P. E. Keegan and Alex P. Weir, the personnel of Car 6, began the present oil field itinerary at Coffeyville, Kansas May 3. Since that time, they have given training at 13 different places in Kansas. During the 15 weeks ending August 14th, 311 men have completed the course. These men represent 29 companies. In addition, J. B. Hynal gave training to large classes at Muskogee and Ardmore, Okla. Mr. Hynal, who was to have given further training at points in southern Oklahoma, has been called away temporarily. Upon his return, he will continue his interrupted itinerary.

Superintendents and others are urged to visit Mr. Keegan on Car 6 upon its arrival at places of training and make definite arrangements with him regarding the most central place for holding classes and for periods of training to suit the greatest convenience of the men. In case a longer time than specified is needed at any of the places of training, Mr. Keegan will be glad to make the necessary arrangements.

BARTLESVILLE.—M. J. Kirwan, general superintendent of the Indian Territory Illuminating Oil Co., with headquarters in this city, is away on a two weeks' vacation. He drove to Chicago, where he met his family, who will return with him.

Petroleum Geologists To Speak in Denver

DENVER, Aug. 28.—Addresses on the geology of several areas of the West will be made by members of the American Association of Petroleum Geologists during the meeting of the American Mining Congress, Sept. 20-24. The petroleum geologists will join with the A. M. C., the American Institute of Mining and Metallurgical Engineers and the American Silver Producers' Association in making this a large meeting.

M. M. Valerius will discuss the geology of western Kansas. His qualifications on this subject include the discovery of the structure which was later developed into the Russell county, Kans., pool.

J. V. Howell, of the Marland Oil Co. of Colorado, will speak on the geology of the Amarillo district. J. W. Beede, of the Dixie Oil Co., will discuss the geology of western Texas. R. C. Coffin and Thomas Harrison will collaborate in a paper on Rocky Mountain geology. Dr. Bailey Willis, one of the renowned geologists of the world, will describe the structure of the Coast Range and tell of its relation to the Rocky Mountain province. C. A. Fisher will outline recent findings in the geology of western Canada and tell how they are related to future development.

WATERLOO, WIS.—J. Powers, agent here for the Standard Oil Co. of Indiana, has been agent for the Standard for 26 years.

The Editor's Viewpoint

National Petroleum News

Exaggeration in Substitution Charges

By Warren C. Platt
Editor

HERE is how interests outside of the oil industry unnecessarily stir up motorists in connection with this campaign against alleged substitution of automobile lubricating oils.

The Better Business Bureau of St. Louis, a reputable organization that has done much for good advertising there, has become excited about motor oil substitution and has addressed the motorists of St. Louis county and possibly of all the state of Missouri with the following query:

"When you buy oil, how often are you gyped? How do you know the oil you pay for is what you ask for?"

Then follows a statement as to the character of the investigation they are making and a number of questions as to how the motorist buys his oil. In the letter great stress is laid upon the so-called substitution in the following language: "Oil substitution, as it is called, is a problem of genuine importance to every car owner. Authorities estimate that millions of dollars are lost each year to American motorists because of this evil."

It is entirely within the province of the Better Business Bureau of St. Louis to make the investigation, but, as the Bureau is seeking facts, and not trying to carry on a campaign itself, its use of this language is exceedingly unfortunate. It remains to be proved whether or not there is any measureable amount of substitution in St. Louis and Missouri, for instance. The way the Bureau has phrased these questions and the added statement that it has made, would only be warranted by knowledge of a great deal of substitution and of the worst kind. This Better Business Bureau could have gotten the facts just as well by a conservative letter asking only for the facts. As it is the bureau has undoubtedly done the oil industry in Missouri a great deal of harm.

This is just a fair sample of what happens when some of the oil industry's evils or alleged evils get into the hands of outsiders. A little thing is seized upon and made much of because it is not understood. Most of the investigations of the oil industry by government and legislative bodies the last ten years have made much of little or nothing. This constant exaggeration in the way of error in the oil industry has given the industry a bad name. None of these agencies would for a minute exaggerate the oil industry's good points because it wouldn't do them any good—it wouldn't be interesting. They couldn't carry on any crusade by it.

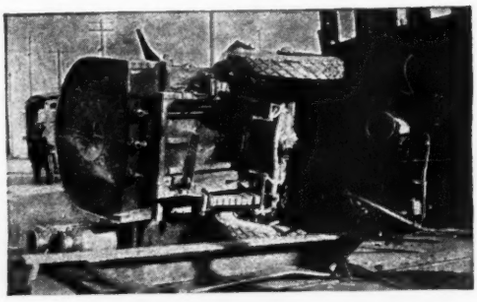
Convincing evidence as to the relative small amount of substitution is furnished by the Cleveland Better Business Bureau, an organization similar to that just referred to, and supported by the big merchants and banks of Cleveland. This same evidence also shows how outsiders are prone to misunderstand and exaggerate. The Cleveland Better Business Bureau gathered some figures through a representative of an interested oil company sent here to investigate national brand conditions. The best this oil representative could do, after making his investigation and doing some calculating, was to figure that 50,000 gallons of what he called inferior oil was sold each year to motorists of Cleveland at an excess price (he said profit) of $10,000. To this representative and to the executives of the Cleveland Better Business Bureau this seemed a large amount. However, the Bureau, being most conservative made no public announcement but did mention it in a confidential report to its members on a lot of other things. It added that most of this was by independent station operators, meaning the small unattached stations.

Just consider this 50,000 gallons in one year, as against the market in Cleveland. There are today, according to accurate estimate, some 185,000 passenger cars and 25,000 trucks in Cleveland and Cuyahoga County, a total of 210,000 motor vehicles. From this we could deduce with reasonable arithmetical accuracy, that the so-called substitute oil or, as it is called by the representative of this national brand oil company "inferior oil," if spread out over all the cars in Cleveland, meant each car and truck in the course of a year got less than a single quart—just one poor lone quart of this so-called substituted or inferior oil. If reports of how this representative of the national brand oil company "tested" the samples he picked up are at all accurate, as we believe they are, it is a mighty serious question as to whether the oil was actually inferior. He is said to have made the tests by squinting at sample bottles of the oil with his eye, holding that he could determine the quality of the oil by its color. Maybe he could. Some years ago, in selling lubricating oil to farmers, the prize test used to be to take a mouthful of the oil, swash it around in the cheeks and then squirt it on the ground and in that way determine its gravity, flash fire, viscosity, cold test, carbon residue and so on.

It is unfortunate that even a quart of oil was substituted on each car and truck in all of Cleveland's wide area in a year's time, just as it is unfortunate that one gets substitutions on some products in some drug-stores, department stores, and furniture stores; just as it is unfortunate that one doesn't always get the amount of meat that he orders, or the kind of groceries that he buys. In fact, one doesn't always get the kind of an automobile that he thinks he is buying. Yes, even the legal advice and medical attention that one purchases at times seems to be slightly diluted. And so far as the statesmanship that this country gets for its money is concerned, there at times seem to be a few flaws in it. So, while it's unfortunate that all these things are true, we must admit that one quart of oil to each car in Cleveland in one year's time would indicate, we think, a high percentage of business honesty.

This record, while it means that the industry should undertake to keep down substitution, does not, however, warrant a general hullabaloo and uproar before the public in attacks upon the oil industry.

The Truck Tank of tomorrow is here today!



Hit "Head On" By a Trolley—Not a Rupture—Not Even a Pinhole Leak!

"One of our trucks was hit by a street car last summer and completely turned over, yet the tank did not leak nor was it damaged except for one rack being badly twisted" says a letter from the Gable Oil Co., Spokane, Wash.

A photograph of the collision is reproduced above. Apparently the tank took the full blow of the tram car. The tank was put into service the next day. No time was lost waiting for a new tank or for repairs. That in itself is a big item.

But more important is the fact that the tank was capable of retaining its hazardous gasoline contents in such an extreme emergency. A ruptured tank might easily have resulted in a fire or worse yet, an explosion. In this particular instance a tram car full of people might have been injured or killed.

It is on such proofs of extraordinary performance as this that the *"Declaration of performance"* is based. Read it, not once, but several times to get the full force of what it means to you. You'll find it on page 31 of *The Truck Tank Hand Book.*

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Send for prices and samples

Allison Coupon Company

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This Letter Beat the $15 Membership Game

CLEVELAND, Aug. 30.—An effective way for the oil marketing company to meet the efforts of the promotion companies that try to establish themselves in the gasoline business through selling $15 memberships entitling the purchaser to special concessions, considerations and so on, is used by the Washington Oil Co. of Washington, Iowa.

This company gets out a letter to its customers when this membership dodge is worked in its territory, offering the same proposition itself at any time if any customer prefers it. Then the letter goes on to point out that the $15 membership amounts to a five-cent margin on 300 gallons of gasoline, which is about what the average customer buys a year, locally, and that this margin is excessive from the point of view of the customer.

When the letter was used by the Washington Oil Co., many persons came to its office to inquire into the proposition the company had made in its letter, but it is said none of them would sign a check to subscribe to a so-called membership, when it's workings were explained to them. The letter the oil company used is as follows:

"Dear Friend:

"During the past two or three days you may have been approached by salesmen who offer to furnish you gasoline and kerosene at cost. You simply pay them $15.00 for the privilege. The proposition looks good on the face of it, but there are a few points about it that deserve consideration.

"We have been in the oil service business in Washington for three years. Just between ourselves, we would ask nothing better than the above proposition. If each of our one thousand customers would pay us $15.00 cash at the beginning of the year, we would net $15,000.00 whether we sold any gas and oil or not. That would be ideal from our standpoint.

"Furthermore, our records show that the average gasoline customer buys only about 300 gallons of gas a year. On that basis, the $15.00 cash payment would represent a profit of 5 cents a gallon, which any service station will tell you is exorbitant.

"We have no quarrel with any legitimate competition. If these people can sell gasoline cheaper than we can, quality and service considered, we would advise that you take on their proposition. But we do feel that as a customer of ours, you are entitled to the above explanation. We simply hope that you will analyze their proposition carefully before you spend your good money. We offer you the same proposition at any time if you prefer it."

MIAMI, OKLA.—Standard Oil Co. of Indiana has completed a service station here.

Rotary Drilling Equipment Standards Soon to be Ready for Industry

By Paul Wagner
N. P. N. Staff Writer

HOUSTON, Aug. 26

VARIOUS sub-committees engaged on the American Petroleum Institute program for standardization of rotary drilling equipment are rounding out their work so as to permit the printing and general circulation of the almost completed reports at the earliest possible moment.

The work is being expedited through Capt. J. F. Lucey of the Lucey Petroleum Corp., 1405 Magnolia building, Dallas national chairman, and R. A. Wilson of the Guiberson Corp., Dallas, national secretary.

A letter signed by Messrs. Lucey and Wilson has been issued to all members of the rotary drilling equipment committee requesting that comments and criticisms, if any, be made promptly to the various sub-committee chairmen and that a copy of any such communications be sent to Mr. Wilson.

Substantial Progress Made

"WE are glad to report," says the joint letter to Messrs. Lucey and Wilson, "that substantial progress has been made all along the line. Various reports and data mentioned in the program for the Colorado Springs meeting were carefully reviewed and provision made for the completion of these reports at the earliest possible moment.

"There was some confusion in the minds of some of the members regarding the personnel and duties of some of the special sub-committee that have been appointed in the past. This situation has been clarified.

The sub-committee variously known previously as the engineers' committee and as the manufacturers' committee now carries the title of sub-committee of manufacturers and engineers with the following membership:

E. E. Greve, Oil Well Supply Company, Pittsburgh, Pa., Chairman.

L. J. Black, Beaumont Iron Works, Beaumont, Texas.

D. S. Faulkner, Union Tool Company, Torrance, Calif.

H. W. Fletcher, Hughes Tool Company, Houston, Texas.

E. W. Goeser, Emsco Drilling & Equipment Co., Los Angeles, Calif.

H. M. Harris, Lucey Mfg. Corp., Chattanooga, Tenn.

E. J. O'Brien, Titusville Forge Co., Titusville, Pa.

E. H. Williams, Union Tool Company, Carnegie, Pa.

W. C. Trout, Lufkin Foundry & Machine Co., Lufkin, Texas.

R. A. Wilson, Guiberson Corp., Dallas, Texas.

The sub-committee of manufacturers and engineers is now engaged in work embracing:

(a) Review of Tolerances on Shafts and Keys, A. P. I. Stds. No. 7 "Dimensional Standards for Transmission" (Shafts, Keys, Chains, and Sprockets).

(b) Review of Tolerances of A. P. I. Stds. No. 7-C "Dimensional Standards for Line Shafts for Rotary Drilling."

(c) To cooperate with those manufacturers and if possible to prepare recommendations on reinforced standards for submission at some future time.

(d) Review of Casing hook data in A. P. I. Stds. No. 7-A: "A. P. I. Recommended practice on Miscellaneous Rotary Drilling Equipment."

(e) Review of Cathead data, A. P. I. Stds. 7-C.

Drafting Taper Joint Sizes

A NEW joint producers and manufacturers sub-committee appointed at the Colorado Springs standardization meeting in June is going ahead with the idea of drafting complete recommendations on all sizes of taper joints, "V" thread, for presentation to the general rotary committee at the next annual meeting in Tulsa, next December.

Uncompleted work of the committee includes:

(a) Review of Report No. 7-B "Dimensional Standards for Taper Joints for Rotary Drilling." (See page 53, A. P. I. Bulletin No. 51, September 4th, 1925.)

(b) Formulation of recommendations on Standard Taper Joints "V" Thread, for the following material:
Fishtail Bits
Drill Collars
Tool Joints
Swivel Connections, including gooseneck thread connections to hose couplings.
Grief Stem Connections.

(c) Dimensional data on large and small Grief Stems, including suggestions on 5½ inch and 6½ inch sizes as standard.

(d) Grief Stem lengths.

(e) Approval of Drill Pipe Specifications in proof copy form prior to publication.

The joint producers'-manufacturers' sub-committee is composed of:

W. W. Fondren, Humble Oil & Refining Co., Houston, Texas, chairman.

R. E. Allison, Contractor, Shreveport, La.

D. S. Faulkner, Union Tool Co., Torrance, Calif.

H. W. Fletcher, Hughes Tool Co., Houston, Texas.

E. E. Greve, Oil Well Supply Co., Pittsburgh, Pa.

F. F. Hill, Union Oil Co., of Calif., Los Angeles, Calif.

E. J. Nicklos, The Texas Company, Tulsa, Okla.

Drawing Shows Rotary String

A REPORT of the proceedings at Colorado Springs, which is now being distributed through the office of Carl A. Young, standardization director of the American Petroleum Institute, at Dallas is accompanied by a letter and drawing prepared by Mr. Faulkner. The drawing, which is reproduced herewith, is described as representing Mr. Faulkner's understanding of the decision made at Colorado Springs relating to specifications covering the rotary drilling string.

"The joints on the various subs, couplings, tool joints, drill collar and bits," says Mr. Faulkner, "will be of the 'V' thread type, but the sizes of the joints are still in question and cannot be standardized until the tool joint box and pin sizes are definitely determined.

"I would be glad to have any comments you may have to make on the drawing or the notations thereof, particularly as regards Note No. 3."

The outstanding decision at the Colorado Springs conference, it will be remembered, was the rejection of the proposed modified Acme thread for rotary tool joints and the adoption of the U. S. standard "V" thread. This question had been up for consideration during the preceding year and a half and numerous field tests of the A. P. I. modified Acme thread had been made in the various producing districts.

Review of Chain, Sprockets

A SPECIAL sub-committee on chains and sprockets, appointed at Colorado Springs by Captain Lucey, is now engaged in a review of chain and sprocket specifications in A. P. I. standard No. 7, "Dimensional Standards for Transmission."

The chain and sprocket committee is composed of:

C. R. Weiss, Link Belt Co., Indianapolis, Ind., chairman.

L. J. Black, Beaumont Iron Works, Beaumont, Texas.

E. E. Greve, Oil Well Supply Co., Pittsburgh, Pa.

H. M. Harris, Lucey Mfg. Corp., Chattanooga, Tenn.

Edward Timbs, Union Tool Co., Torrance, California.

A discussion regarding the specification on "Chain and Sprocket Tooth Form" as published in A. P. I. Stds. 7, "Dimensional Standards for Transmission," 1st Edition, June, 1926, brought out the fact that a request had been received from the California district subcommittee for a sprocket having slightly, greater pitch-line clearance and having some slight changes in other respects, which it was thought would permit the use of a certain manganese chain on A. P. I. standard sprockets.

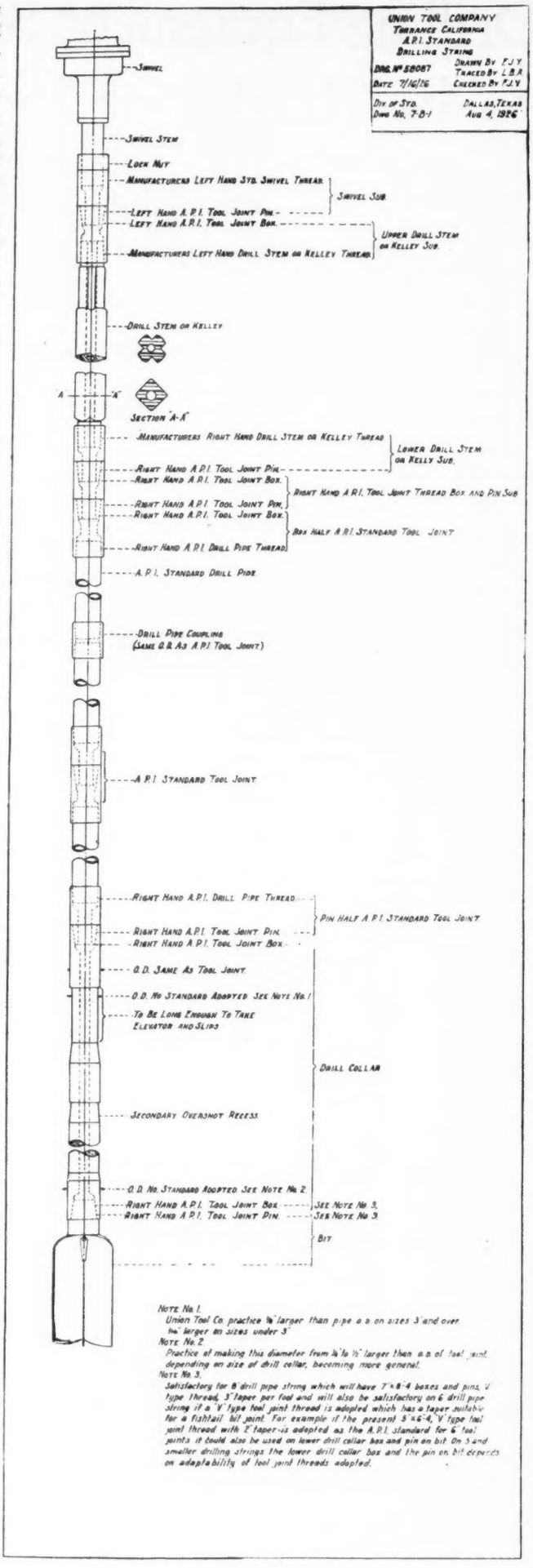
Manganese Chain Explained

IN explanation, Mr. Faulkner said:

"The manganese chain has a larger roller diameter and a little longer pitch, than the Standard A. P. I. Chain. In order to take care of a larger roller diameter it would be necessary in addition to the longer pitch to give more clearance on the faces of the teeth, and to also change the root diameter, so that instead of having a compensating sprocket we would have more of a compromise sprocket to take care of chains not made to A. P. I. standards.

"When these facts were brought to the attention of the California people, I believe their opinion was changed as to the advisability of making that sprocket, because it would give too much clearance and to much back lash on the chain made to A. P. I. Standards, and it would throw the sprockets out of standard in order to take care of chains not made according to the A. P. I. Specification. If they need a heavier chain, the A. P. I. has provided standards on a chain known as the No. 3½, which is halfway between the No. 3 and the No. 4."

Chairman Lucey summed up some further discussion on this subject by stating that the chain and sprocket standard had been adopted at Los Angeles; both the chain and the sprockets were being manufactured today, and the only thing not yet approved was the formal specification; finally, it was moved by Mr. Greve, seconded by Mr. Hill, and carried, that the specification be approved as now published in A. P. I. Stds. 7, 1st Edition, June, 1926, Pages 7 to 28 inclusive, with the understanding that data on any small details therein not yet completed, or on any slight changes necessary, would be


UNION TOOL COMPANY
TORRANCE CALIFORNIA
A.P.I. STANDARD
DRILLING STRING
DRG. Nº 58087
DATE 7/16/26
DRAWN BY F.J.Y.
TRACED BY L.B.A.
CHECKED BY F.J.Y.
DIV OF STD. DWG No. 7-B-1
DALLAS, TEXAS Aug 4, 1926
SWIVEL
SWIVEL STEM
LOCK NUT
MANUFACTURERS LEFT HAND STD. SWIVEL THREAD
SWIVEL SUB
LEFT HAND A.P.I. TOOL JOINT PIN
LEFT HAND A.P.I. TOOL JOINT BOX
UPPER DRILL STEM OR KELLEY SUB.
MANUFACTURERS LEFT HAND DRILL STEM OR KELLEY THREAD
DRILL STEM OR KELLEY
A
A
SECTION "A-A"
MANUFACTURERS RIGHT HAND DRILL STEM OR KELLEY THREAD
LOWER DRILL STEM OR KELLY SUB.
RIGHT HAND A.P.I. TOOL JOINT PIN
RIGHT HAND A.P.I. TOOL JOINT BOX
RIGHT HAND A.P.I. TOOL JOINT THREAD BOX AND PIN SUB
RIGHT HAND A.P.I. TOOL JOINT PIN
RIGHT HAND A.P.I. TOOL JOINT BOX
BOX HALF A.P.I. STANDARD TOOL JOINT
RIGHT HAND A.P.I. DRILL PIPE THREAD
A.P.I. STANDARD DRILL PIPE
DRILL PIPE COUPLING
(SAME O.D. AS A.P.I. TOOL JOINT)
A.P.I. STANDARD TOOL JOINT
RIGHT HAND A.P.I. DRILL PIPE THREAD
PIN HALF A.P.I. STANDARD TOOL JOINT
RIGHT HAND A.P.I. TOOL JOINT PIN
RIGHT HAND A.P.I. TOOL JOINT BOX
O.D. SAME AS TOOL JOINT
O.D. NO STANDARD ADOPTED SEE NOTE No. 1
TO BE LONG ENOUGH TO TAKE ELEVATOR AND SLIPS
DRILL COLLAR
SECONDARY OVERSHOT RECESS
O.D. NO STANDARD ADOPTED SEE NOTE No. 2
RIGHT HAND A.P.I. TOOL JOINT BOX
SEE NOTE No. 3.
RIGHT HAND A.P.I. TOOL JOINT PIN
SEE NOTE No. 3.
BIT
NOTE No. 1.
Union Tool Co. practice ⅛" larger than pipe o.d. on sizes 3" and over
¼" larger on sizes under 3"
NOTE No. 2.
Practice of making this diameter from ¼" to ½" larger than o.d. of tool joint, depending on size of drill collar, becoming more general.
NOTE No. 3.
Satisfactory for 8" drill pipe string which will have 7"x8"-4 boxes and pins, V type thread, 3" taper per foot and will also be satisfactory on 6" drill pipe string if a "V" type tool joint thread is adopted which has a taper suitable for a fishtail bit joint. For example if the present 5"x6"-4, V type tool joint thread with 2" taper is adopted as the A.P.I. standard for 6" tool joints it could also be used on lower drill collar box and pin on bit. On 5" and smaller drilling strings the lower drill collar box and the pin on bit depends on adaptability of tool joint threads adopted.

supplied by Mr. Weiss in the near future, in order that the specifications be sent out to the industry in bulletin form as soon as possible.

At the Colorado Springs conference there was considerable discussion regarding the details on Shafting as given in the Rig Iron Specifications, Supplement No. 1 to A. P. I. Stds. 6, 1st Edition, June, 1926, and in the two Rotary Drilling Equipment Specifications, "Dimensional Standards for Transmission," A. P. I. Stds. 7, 1st. Edition, June, 1926 and "Dimensional Standards for Line Shafts," A. P. I. Stds. 7-C, 1st. Edition, June, 1926.

It was finally moved by Mr. Greve, seconded by Mr. Faulkner, and carried, that the standards on shafting, as given in the specifications mentioned above, remain as stated, save for slight change in tolerances. These tolerances are to be discussed jointly by representatives from the manufacturers and engineers sub-committee of the special A. P. I. committee on rotary drilling equipment, and by representatives from the manufacturers sub-committee of the special A. P. I. committee on rig irons.

Tolerances

IN connection with Mr. Greve's report, the fact may be stated here that at a later meeting of the rig iron committee, (which was attended by the members of the rotary committee), it was decided to let the tolerances on shafting stand, in so far as the rig iron standards are concerned, subject to review by the various rig iron manufacturers, but that the tolerances on rotary line shafts are to be reviewed further by the manufacturers and engineers sub-committee which is then to report to the chairman of the main rotary committee.

After some discussion regarding the length of the grief stem, it was moved, seconded and carried, that the matter of grief-stem lengths be referred to the joint producers'-manufacturers' sub-committee on "V" Thread Details, previously appointed. It was understood that this committee would canvass beforehand the various districts and obtain opinions on the subject.

The fact was brought out that 5½ inch and 6½ inch grief stems were in popular use, and that the A. P. I. standards shown on Page 58 of Bulletin 51 did not list these sizes, and after considerable discus-

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the oil man needs
when thinking of building
is readily found
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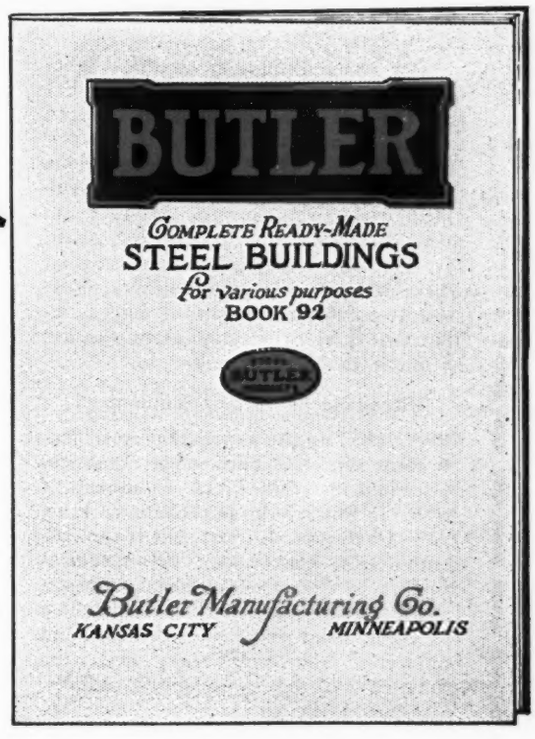

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Cincinnati, Ohio

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They are airy in the hot months, weatherproof in rain and snow, and snug and warm in winter.

Yours very truly,
The Cincinnati Butchers' Supply Co.
(Signed) Herman Schmidt, Secy.

The Highland Body Mfg. Co.
430 Elmwood Place
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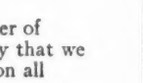

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sion it was moved and carried, that the question of 5½ inch and 6½ inch sizes be left with the joint producers'-manufacturers' sub-committee on "V" Threads for further consideration, with the possible view of adding it to the list of sizes previously adopted.

Casing Hooks and Catheads

CHAIRMAN Lucey advised the committee that the Oklahoma subcommittee was in accord with the A.P.I. specifications except on casing hooks and catheads, Mr. Backon having stated that the dimensions as given for the hook were not sufficient to protect the purchaser. (The casing hook is described in A. P. I. Stds. 7-A).

Discussion brought out the fact that the A. P. I. method of measuring was to indicate the stock from which the hook was made. Whereupon, after further discussion, a motion was carried, directing the manufacturers' and engineers' committee to amplify the methods of measuring hooks. It was understood that Mr. Greve would furnish the necessary data.

After some discussion on the subject of catheads, it was moved and carried, that the matter of catheads be referred to the manufacturers' and engineers' sub-committee, with the instructions that, wherever possible, catheads be provided with two keyways in order to make them reversible on the line shaft. Mr. Faulkner brought out the fact that where catheads were made of manganese steel two keyways might be impracticable, that it was a question as to whether or not it could be done.

Miscellaneous Rotary Equipment

TAKING up the approval of specifications on "Recommended Practice: Miscellaneous Oil Field Equipment": A. P. I. Stds. 7-A, 1st. Edition, June, 1926, Chairman Lucey asked for the committee's approval on the specifications as written, noting the changes on casing hooks suggested by Oklahoma, (to come from the manufacturers' and engineers' sub-committee), and the elimination of the hose clamp standards. Whereupon the specifications were approved for publication and distribution.

Line Shaft Standards

CHAIRMAN Lucey requested the approval of the rotary committee for specifications on "Dimensional Standards for Line Shafts," A. P. I. Stds. 7-C, 1st Edition, June, 1926. After some discussion which brought out the fact that the tolerances shown therein on keys, keyways and shafting were a manufacturing proposition, it was moved and carried, that the specification be approved, subject to corrections on tolerances, which are to be supplied by the manufacturers' and engineers' sub-committee.

Transmission Standards

CHAIRMAN Lucey asked the committee's approval of the specifications "Dimensional Standards for Transmission" (A. P. I. Stds. 7, 1st. Edition, June, 1926, Pages 1 to 6 inclusive): upon motion by Mr. Greve, seconded by Messrs. Allison, Patrick and Black, and carried, the specifications were approved, subject to the changes outlined in the letter from A. P. I. headquarters; (this letter called attention to the change in the basic key sizes for the 5½ inch and 6 inch shafts, which were changed to agree with the A. S. M. E.), and subject to the approval of manufacturers, this to be sought and reported by the Manufacturers' and Engineers' Sub-Committee.

(Special Note: Report No. 7, "A. P. I. Transmission Standards," contains basic recommendations on shaft size key sizes, including tolerances on keys only. No tolerance was specified on shaft sizes, as those tolerances are subject to the use to which shafts are put, as mentioned in A.P.I. Stds. No. 7-C, "Line Shaft Standards." This report also contains the Chain and sprocket tooth form standards. The section relating to shaft and key sizes are to be reviewed by the sub-committee of manufacturers and engineers; the chain and sprocket section was referred to Mr. Weiss, chairman of the chain and sprocket sub-committee, for further review and possibly some slight changes before final printing.)

KANSAS CITY, Aug. 29.—The Missouri Oil Men's Association will meet at Kansas City in September. Exact dates will be announced soon. "The Gasoline of the Future" will be the chief topic, George S. Alle, secretary, is seeking speakers who are authorities on various kinds of gasoline—anti-knock, straight run, cracked and blends.

SIOUX FALLS, S. D.—On Aug. 1 the Penn Soo Oil Co. of this city changed its name to the Rohde Oil Co. The company is state distributor of Champlain Refining Co.'s products, in addition to Penreco and Dependo motor and tractor oils.

A new rotary lift has been installed at the company's filling station here, which is proving a business getter for oil and grease, according to E. W. Rohde, manager.

WEST READING, PA.—A new service station was opened here on Aug. 7 by Standard Gasoline Co., Inc., marketer of petroleum products and auto accessories. Charles A. Goldsmith, who was formerly general manager of the Central Pennsylvania Oil Co., here, and also with the Independent Pennsylvania Oil Co., Camden, N. J., is treasurer and general manager of the Standard Gasoline Co.

The new staion is drive-in, has a 60 foot frontage and is equipped with four pumps.

Anglo-Persian Company Shuts in F7, One Of World's Most Famous Producers

From Naft Magazine, July Issue

One of the most remarkable wells ever drilled in any country was the F7 of the Anglo-Persian Oil Co., Ltd., in the Maidan-i-Naftun field of Persia. For years this well figured prominently in the Anglo-Persian's total production and in 15 years it contributed the enormous total of more than 50 million barrels of oil to that company's output.

The well recently was "killed" by the use of mud fluid. The following account of the well's history and the method of mudding it off appeared in the July issue of The Naft Magazine, official publication of the Anglo-Persian company. It is evident that, to the author and officials of the company, F7 was more than an oil well; it was an institution, and of almost human attributes.

FROM one point of view an oil well is merely a hole in the ground from which oil flows or is laboriously pumped. In such a view the well itself is nothing more than the connection established between the surface of the ground and the reservoirs of oil below, and has no interest except for what flows through it—no more interest, in fact, than would attach to an equal length of pipe line

But the petroleum engineer knows better. To him an oil well has character and personality quite apart from the oil it conveys. He knows that there are generous wells and mean wells, equable wells whose history is one of orderly progress and production, and furious wells forever threatening to break loose and wreck themselves and the prosperity of a whole field. Of the latter type the most famous example was the Mexican well, Dos Bocas, which burst suddenly into gigantic and uncontrollable production, took afire, and finally burned itself out in an enormous blackened crater.

Every little incident connected with the sinking of a well and its drilling-in, all the various kinds of trouble which may or may not develop during these operations, the caving-in, the fishing jobs, the difficulty or ease of the formations, and all the happenings of its later career, whether prolific or niggardly, combine in the imagination of the oil engineer to give to a well almost the personality of a living thing. There are wells of which he thinks and speaks with sentimental enthusiasm, or with indignation, as though they had deliberately deceived and disappointed him, or sometimes merely in exasperated boredom.

This naturally is the view of the professional, the initiate. But once in a while there is an oil well which captures the imagination even of the general public. Of this there has never been a more conspicuous example than our own F7 in Persia, the great well which in its fifteen years of steady productivity has contributed the enormous output of over 6,700,000 tons of oil.. (Note: A ton as here used is equal roughly to 7½ barrels of 42 gallons).

Always Held In

THIS was a restricted production, for F7 never was opened out to its full capacity—there was no need. Small wonder then that the public should have evinced for F7 an interest which they took in no other oil well. People who knew nothing about the technique of oil recovery, knew and talked about F7. Journalists visiting Britannic House seldom failed to inquire about its continued health and productivity. At the annual meetings of the company it was pleasant to note the buzz of interest among the shareholders when the chairman mentioned the name F7, and the unfailing applause with which they heard that it was still producing with undiminished vigor.

Obviously they felt that all was right with the company so long as that great well was doing its duty. In fact, it would hardly have occasioned surprise if some imaginative shareholder had jumped to his feet and proposed a vote of thanks to F7 for its splendid and long continued services. And there can be no doubt of the enthusiasm with which such a motion would have been received.

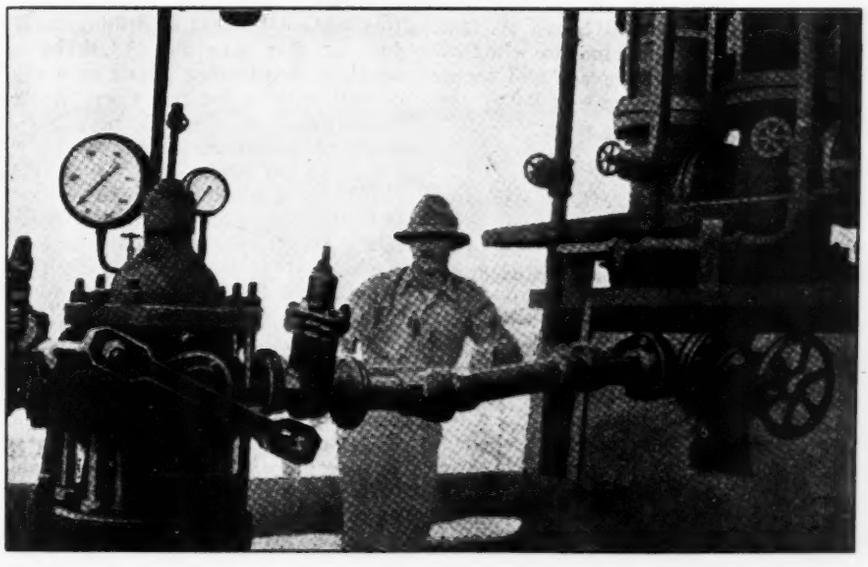
It was, therefore, with expressions of keen regret that the chairman, Sir Charles Greenway, announced at the last annual meeting of the company, Nov. 10, 1925, that the board of directors had reluctantly come to the conclusion that F7 must at last be shut in —not because there was any sign of failure in its productivity, but because the well-head fittings had become so worn in their long service as to be, in the opinion of our technical authorities, no longer safe. Sir Charles, in making the announcement, said:

Fittings in Dangerous Condition

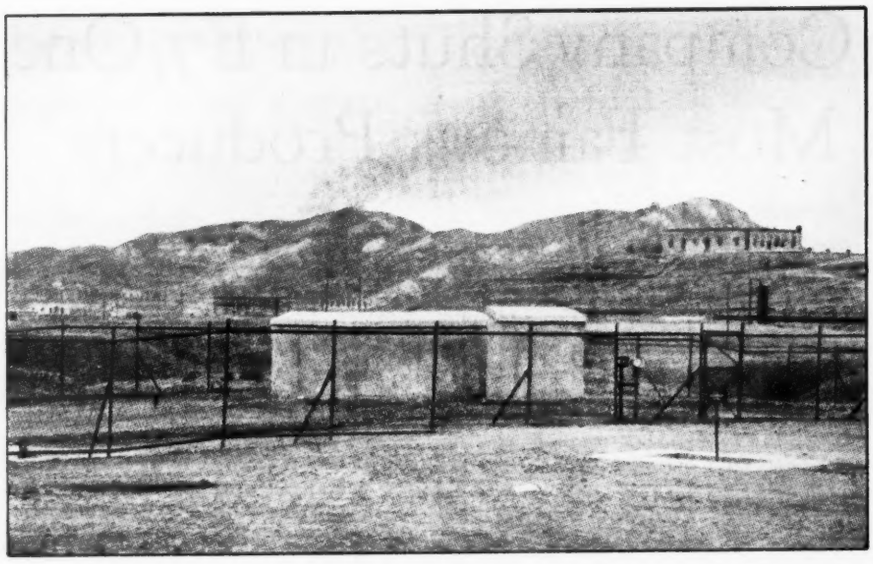
"AS I have mentioned on previous occasions, this famous well—which for a long time was regarded as our index of production and whose yield to date is 6½ million tons — is now eclipsed by a number of others. The well head fittings with which it was capped in 1909 are, however, in a dangerous condition, and since the well is situated near the most active and populated area of the field, it would be a serious matter were it to get out of control. Therefore, as the oil it produced can equally well be drawn off and with greater safety from adjacent new wells equipped with modern high-pressure fittings, it is intended to close it down at an early date for the sake of the greater security that will thus be obtained.

"None the less, since we have come to regard F7 as an old friend, its deliberate suppression as a matter of field policy will cause us all a certain amount of sentimental regret."

Before coming to a description of the actual operation of "mudding-off" this



Mud-containers connected to the flowhead for the operation of mudding off.



The gach wall and fencing used to protect F7 in its later years.

famous well, it will perhaps be of interest and value to tell something of the history which gave it so secure a place in the affections of the company and the public.

Oil was first struck in this well in November, 1911, at a time when there were few other producers in Maidan-i-Naftun and none of very great volume. There was even, on the part of the operating staff at that time, some anxiety as to their ability to meet the requirements of the new refinery at Abadan and the crude shipments. F7 came in with an initial production of about 30,000 gallons a day. This, of course, was nothing compared to its subsequent production, but it is characteristic of the fortunate and equable character of the well's history that it should have begun so quietly. The field staff at that period had had little experience of the high pressures and enormous productions later obtained, and had F7 come in with the full force of its later output it might easily have run wild and done irretrievable damage. As it was, the oil-bearing limestone had barely been touched when the well began to flow, and there was ample time to withdraw the tools safely and replace and secure the top flange by means of taper set-screws.

Fittings of Cast Iron

THE well-head valves and fittings of F7 were only of cast-iron and comparatively light. At the time they were installed they seemed quite sufficient for the work they had to do, though subsequent experience in the Persian field demonstrated the need for the heaviest and most powerful fittings obtainable. But in November, 1911, there was no indication of the terrific strain to which the fittings of F7 were to be subjected over a long period of years. And, after all, they did stand the strain, though they were the occasion of many hours of anxious thought to the technical management, especially in the later stages of the well's active life.

From the time oil was struck in F7, the well was never closed in. This was due to the fact that the pressures developed were considered to exceed the safe working limit of the cast-iron flow-head. There was also a belief at the time that the channel conveying the oil to the bottom of the well might possibly be somewhat choked up.

F7 was, therefore, permitted to flow freely into the tanks situated some two hundred yards distant, which it did at a steady rate of approximately 30,000 gallons a day until March, 1914, when suddenly and without any warning it drilled itself into the lower and richer area of the limestone and began to produce at the tremendous rate of 450,000 gallons a day with a flow-head pressure of about 300 pounds to the square inch. And even this, as stated before, was a restricted production, for there is little doubt that if F7 had been fully opened out the production would have amounted to 750,000 gallons a day.

Picked Right Time

A SPECIAL interest attaches to the period at which F7 accomplished this remarkable feat of drilling itself in. Just at that time the Admiralty was seriously considering Persia as a source of fuel supplies for the Navy. A Royal Commission, of which Admiral Sid Edmond Slade and Sir John Cadman were the chief members, had visited Persia in 1913 and conducted an investigation into the potentialities of the oil-fields. Their report was favorable, and it is likely that in any case their recommendations would have been adopted.

But, if a deciding factor had been required, it would undoubtedly have been furnished by the sudden productivity of F7, which thus gave overwhelming confirmation to the favorable opinions of the Commission. It is certain that this striking proof of the richness of Maidan-i-Naftun was taken into account by the government, which a few months later, in June, 1914, secured the controlling interest in the company. F7 was thus enabled to play an important role in a decision which has meant so much to the company and to the nation as a whole.

The amount of oil required in 1914 for the refinery at Abadan and for shipment was only about 250,000 gallons a day. The production of F7 had, therefore, to be restricted so far as safety would permit. With the completion in 1917 of the new 10-inch pipe line, this was no longer necessary, and from that time till the end of its active career F7 produced at a steady rate of 450,000 gallons a day, with a flowhead pressure which to the very end remained practically undiminished. This constitutes a remarkable record in the history of oil well productivity anywhere in the world. Even during the spring of 1915, when the main pipe line was cut near Ahwaz by the Turks, and there was not sufficient storage in Fields to receive the oil, part of the production of F7 was burned, rather than run the risk of trying to close in the well. The same course had again to be resorted to for a few hours in the spring of 1924, when all the lines between Fields and the storage tanks were carried away by the flood.

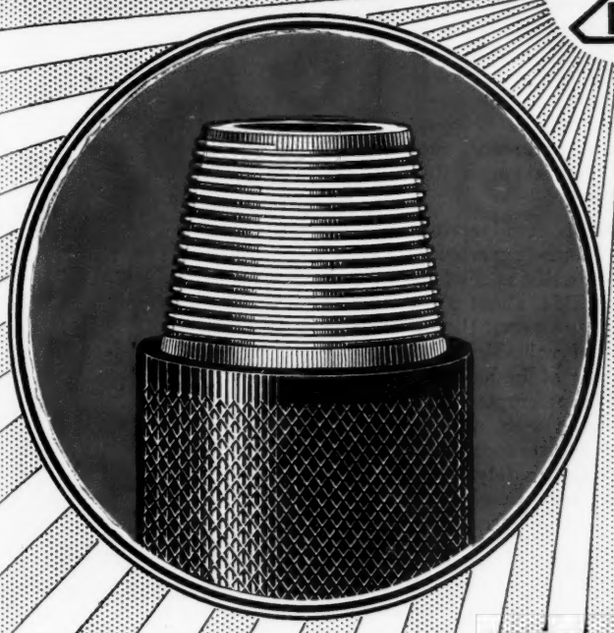
Were Source of Anxiety

DURING all these years the condition of the well-head fittings of F7 were a source of constant anxiety to the management. There was always the danger that they would give way under the heavy and unceasing pressure, and that the suddenly released gas and oil would catch fire. Such a result would have been nothing less than a disaster. Constant supervision was exercised over the well, and every care was taken that there should be as free and unimpeded a course as possible for the oil to the storage tanks.

In spite of these precautions, the danger was one which inevitably became more serious as time went on. The only practical course was to shut in the well by choking it with mud or cement, any substitution of stronger fittings with the well in active production being quite out of the question. The decision to close F7, however, was one which the management, for various reasons, some economic, some sentimental, naturally wished to put off till it became unavoidable. But at last the limit of safety was felt to have been reached, and the work of "mudding off" the great well was reluctantly ordered. It was begun on March 23, 1926, and carried through to a completely successful conclusion on the following morning. That the whole operation of restraining the enormous subterranean forces for which F7 was the outlet should have gone through without a hitch and in strict accordance with plan, is an engineering triumph which reflects the greatest credit on the Fields management and staff, whose skill and care made it possible.

Forced Mud Down Hole

THE problem, briefly, was to force mud down a hole over 1350 feet long, up which oil was rushing at tremendous speed and with a pressure



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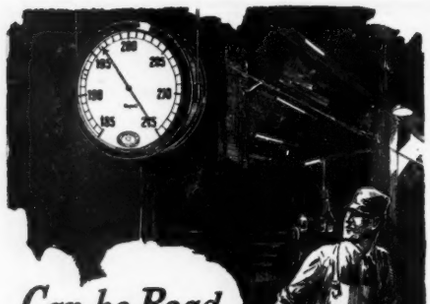

Can be Read in the Dark

Here's a gauge you can read at a distance, from **either side**, in a **pitch dark** room.

The two opal glass dials are illuminated by a number of ordinary electric lights and there are no shadows. Thus, the slightest deviation in pressure can be easily seen, allowing close control.

This gauge has two complete movements and springs coupled to one connection. The new patented spring design has sufficient strength for high pressure and is extremely sensitive, which permits abbreviating the scale so that 15 lbs. on either side of the working pressure appears on dial.

AMERICAN

Double-Face Illuminated MASTER GAUGE

may be adjusted for hydrostatic head from the outside by means of a key **without removing** glass or pointer.

The steel case is beautifully finished in dull black hard rubber. Furnished with single or double dial in two sizes, 24″ and 36″. Is completely wired and equipped with plug socket.

Can be suspended by steel rods in a central location in large boiler rooms, or elsewhere, and seen from any point.

Write for illuminated Easter Gauge Catalog A-27.

AMERICAN SCHAEFFER & BUDENBERG CORP.

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Buffalo *Los Angeles Salt Lake City Tulsa
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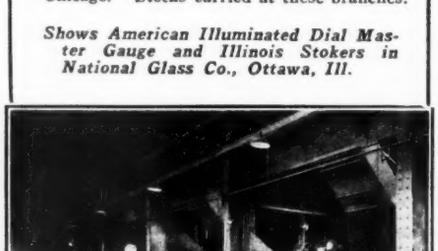
Shows American Illuminated Dial Master Gauge and Illinois Stokers in National Glass Co., Ottawa, Ill.



of hundreds of pounds to the square inch behind it. Moreover, the hole opened out at the bottom into great fissures and cavities, into which the mud would presumably slip away and disappear. When, in addition, the condition of the well-head fittings is considered, the difficulty and danger of the operation must be evident even to the most untechnical reader.

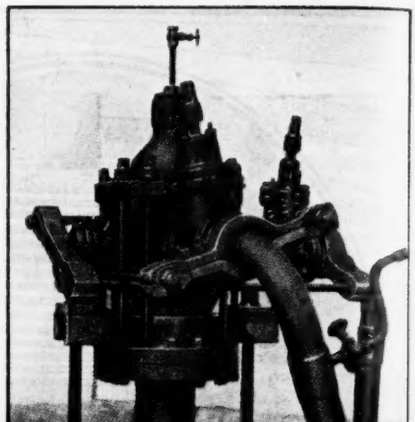
Fortunately, the Fields engineering staff had already had some experience in the "mudding-off" of wells at Fields, notably in the case of B23 about two months previously. They were, therefore, in the possession of valuable data, but nothing on this scale of importance and difficulty had been attempted before. It is likely that the men on the job got very little rest or freedom from acute anxiety till it was all safely over, and they could heave those long sighs of relief which come straight from the heart.

The first part of the task was to erect a derrick over F7, for the drilling rig had naturally been taken away years before when the well came into active production. Before the derrick was put up, however, a stone wall about eight feet high was built around the flowhead and covered with steel girders to protect the well from any damage from material that might be dropped during the construction of the derrick. Then, by the side of the well and about five feet away from it, three containers sixty feet long and made of ten-inch casing were erected and braced to the side of the derrick. These containers, each controlled by a ten-inch gate valve, were coupled at the bottom to a common manifold, the manifold being again coupled by a flexible connection to one of the two three-inch production valves on the well.

From the other production valve a further connection was made by a two-inch pipe to the top of the containers, with the object of allowing the pressure of oil in the well to be passed to the top of the containers, thus equalizing the pressure above and below the columns of mud they contained. In this way it was designed that the mud by its own weight, should slip freely down the well through the oil and gas.

A wooden tank was made, about twelve feet long by six in width and four feet high, with a steam pipe leading into the bottom. In this was boiled the mud which was used in plugging up the well, boiled mud being more viscous than that which has merely been mixed with cold water. As the mud was treated it was run into three pits of sufficient capacity to fill the well three times over, allowance being thus made for the loss of considerable quantities of mud in the fissures of the oil-rock.

From the bottom of these storage pits the mud was taken to a pump connected with the containers, through which a pressure could, if necessary, be maintained on the well. In addition, hundreds of clay balls were made about



F7 with the elaborate arrangement of braces designed to strengthen the flowhead.

two inches in diameter, the clay being mixed up with the chopped strands of Manila rope, as a further stopping for the holes in the limestone.

Shut in 30 Minutes

ALL the apparatus having been thoroughly tested, the actual operation of "mudding-off" was begun. On the morning of March 23rd, for the first time in its history, F7 was closed in. It was kept closed for thirty minutes, in order to allow separation of oil and gas to take place in the well. In this way a considerable initial quantity of mud could be run into the well very quickly, the mud falling rapidly through the gas, its progress down through the oil being naturally much slower.

The first container-full of mud fluid was then emptied into the well, being followed in due course by the other two. As the mud was injected the pressure in the well gradually dropped. After ten container-fulls the flowhead pressure stood at zero, and after twelve —a quantity which should have filled the well completely—a vacuum was registered. This showed that the mud was slipping away into the fissures of the rock, and another valve was immediately bolted to a flanged outlet on the flowhead. Through this the clay balls were fed in by hand one at a time, the liquid mud being still run in from the containers. So porous did the oil-rock prove to be, that at one period of the operation a vacuum of 25 inches of water was shown on the gauge.

The work went on all day and through the night. Gradually the vacuum gauge fell to zero, and it became apparent that each charge was actually filling up the well. No less than 58 container-fulls of mud—a quantity equal to six times the capacity of the well—were run in before the operation was

complete and the fluid level could be maintained at the well-head.

Feed in Mud for Days

AS the level still dropped very slowly, showing that the mud was still in some degree finding its way into the limestone, small quantities of fluid mud and clay balls were fed into the well every morning for some days, a pressure of 200 pounds to the square inch being maintained during the night to force the mud back into the rock and prevent any return of oil into the well. This operation is, in fact, still going on in smaller and smaller quantities, though there are no signs of oil or gas or pressure. F7 is completely and definitely shut in.

Will F7 ever be brought back to production? The task would offer no special difficulty from an engineering point of view, all that would be necessary being to fit modern high-pressure valves and flowhead to the top of the casing and clear out the mud. The casing, however, was never cemented, the well coming in so quickly that there was no time to do so, and undoubtedly considerable corrosion has taken place below ground.

It is not likely, therefore, that F7 will ever flow again. Considering that it has rendered fifteen years of service and produced not far from seven million tons of oil, it would seem to have fully earned its rest. In the history of the Company and in the affections of the Staff its place is secure. It is the intention of the Directors that the original drilling rig should be placed over the well as a memorial, and that the flowhead and fittings should be installed in the main entrance hall of Britannic House with a suitable inscription. This is a pretty touch of sentiment which will make an immediate appeal to all who know anything of the history of this great oil-well, which proved so staunch a servant of the Company and indeed of the whole nation.

Pennzoil Co. Takes Over Penna. Distributor

OIL CITY, PA., Aug. 30.—Purchase of the equipment and stock of the DuBois Supply Co., of DuBois, Pa., by The Pennzoil Co., of Oil City, was consummated the latter part of July. The former had been operating 100 gasoline pumps over DuBois territory, and maintained a storage capacity of 124,000 gallons for gasoline and 20,000 gallons for oil. George Sloppy, who was manager of the DuBois company for several years had developed it into one of the largest distributors in its section.

Headquarters of the company since its acquisition by the Pennzoil will be maintained at DuBois.

WICHITA, KANS.—Craig & Craig Oil Co., with general offices here, has taken on the distribution of Waverley Oil Works Co. products at its stations here.

Power . . . . clean smooth strength . . . . in the Dunning Junior Automatic Air Compressor is rarin' to go . . . . to earn money for you.

Its sturdy simplicity makes the Dunning *The Thoro'bred of them all.* At the price . . . $138 . . . less a Service Station discount, it is a mighty good buy.

Write today for details

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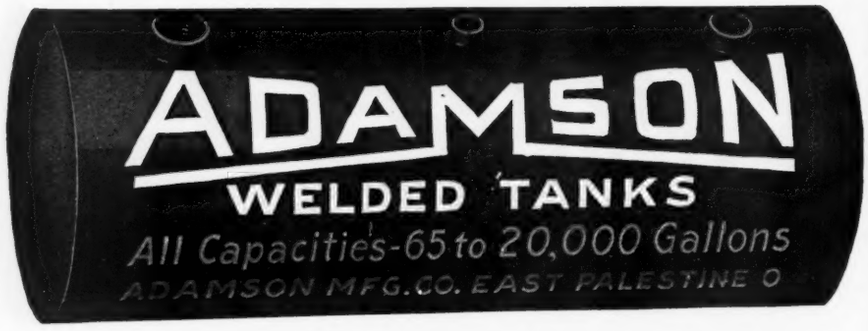
Steel Buildings for Every Purpose

Warehouses - Pumphouses - Sub-Stations - Meterhouses - Engine Houses - Garages Gasoline and Oil Filling Stations, Etc.

We manufacture the simplest to the most elaborate filling stations. If you have in mind any additions or improvements, let us furnish you plans and prices.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. **Cincinnati, Ohio**



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REFINERS OF OKLAHOMA
TEXAS AND LOUISIANA

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GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS

Viking Begins Operating Clarendon Refinery

WARREN, PA., Aug. 27.—Installation of new wax plant equipment is nearing completion at the refinery of the Viking Oil Corp. which a month ago purchased the plant of the Crown Central Oil Corp. at Clarendon. Other alterations have been made or are being made which will modernize the still equipment. Most of the plant is already in operation.

The Viking Oil Corp. is the evolution of a carload marketing business begun in Warren several years ago by L. C. Jamieson, who operated under the style of Viking Oil Co. Later Mr. Jamieson acquired a small refinery at Stoneham, near Warren, and put out a complete line of Pennsylvania products. These carried the brand name "Conquest Oils" as well as the insignia of the Pennsylvania Grade Crude Oil Association.

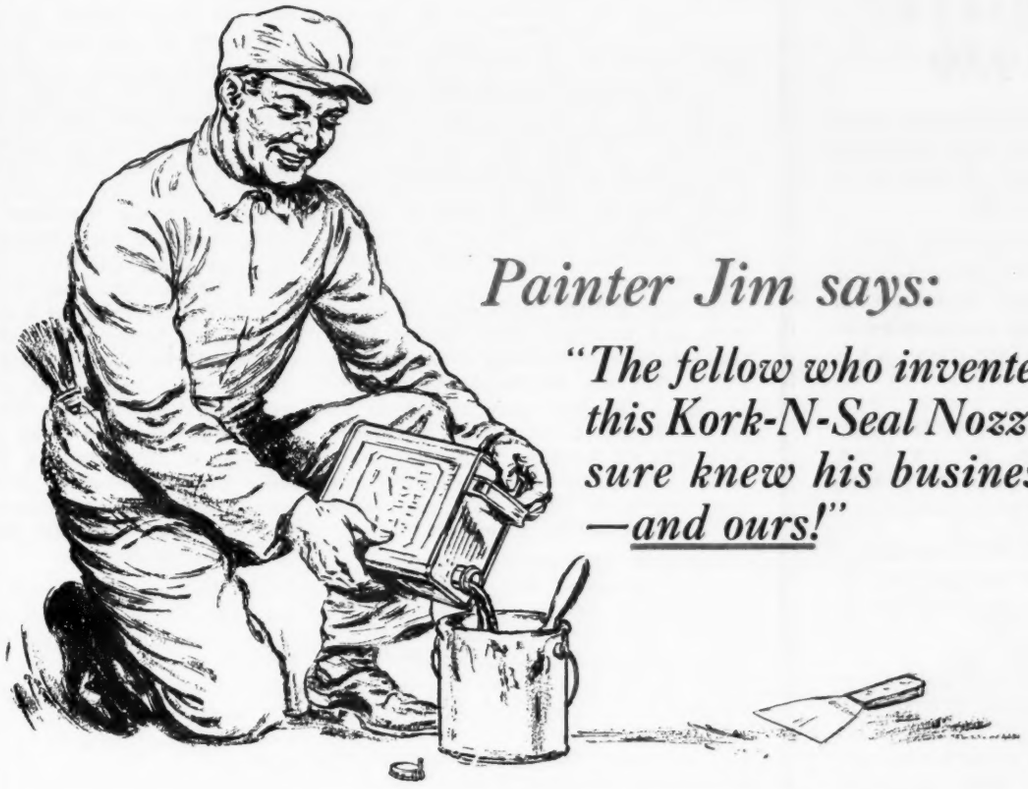
With F. J. McCoy, formerly of the National Forge & Tool Co., Irvine, Pa., Mr. Jamieson organized the Viking Oil Corp. which was chartered in Delaware, and purchased for cash the Crown Central plant. Officers of the company are: Mr. McCoy, president and treasurer; Mr. Jamieson, vice-president and general manager; R. W. Clark, secretary; George H. Seager, superintendent, and A. L. Fisher, assistant superintendent.

The new corporation will take over the marketing business of the Viking Oil Co. which has specialized in petrolatum, motor oils and general lubricants, and the office will be at Clarendon. Products will be sold to jobbers or on the open market, Mr. Jamieson said. The company has no retail outlet of its own.

The refinery has a capacity of approximately 1000 barrels a day. A crude supply has been arranged for through a private pipe line, Mr. Jamieson said, and a high grade of uncontaminated Pennsylvania crude will be used exclusively. The refinery has a new Carbondale wax plant consisting of two 40-ton units with modern presses and facilities for cold settling bright stocks. The plant has an unusually large filtering capacity.

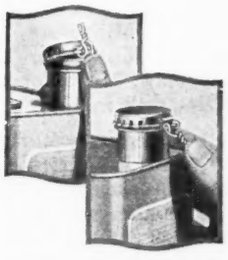
The following pure Pennsylvania products will be manufactured: high test gasoline, naphthas, kerosene, 300 oil, 36-40 straw fuel oil, non-viscous neutrals, all viscous neutrals, both 600 and high fire test cylinder stocks, light and dark filtered bright stocks, 122-124 and 124-126 white crude scale wax.

LAGRANDE, ORE.—With the completion of its bulk plant at Union, Ore., the Fletcher Oil Co. now maintains a chain of stations from the Wyoming line to Portland on the Oregon trail highway, according to T. R. Maxwell, general manager. Veltex products are handled.

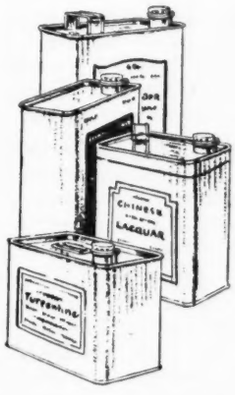


Painter Jim says:

"The fellow who invented this Kork-N-Seal Nozzle sure knew his business —and ours!"



To open: merely raise the lever and push with thumb.
To reseal: replace cap on container and push lever down.



If you have opened an ordinary paint or varnish can and pried with might and main (probably with a knife or screw-driver) . . . very likely spilled a few drops on hands, clothes and floor . . . then you will understand why thousands of journeymen painters are unanimous in their approval of the new Kork-N-Seal Nozzle for cans.

Opens in a second. Just a gentle pull of the lever. Ready for instant use. Pours smoothly and cuts off immediately. No after-drip. To close, simply affix cap and press lever down. *No waste through hardening or evaporation.*

In our opinion the new Kork-N-Seal Nozzle is the greatest single improvement in can-sealing in many years.

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The Petroleum Register 1926

is now off the press, with hundreds of new listings. It combines in one book the following:

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Two new features—an alphabetical directory of executives of leading oil companies and their positions. Reproductions of lease forms used by producers and prospectors.

Also Statistical Section; Refinery and Natural Gasoline Plants; Trade names of leading brands of petroleum products; Secretaries and headquarters of oil associations.

National Petroleum News
803 Caxton Bldg.
Cleveland, Ohio

Here is my check for $10 for the June 1926

PETROLEUM REGISTER

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Great Lakes Oil Tonnage Gains But More Slowly Than U.S. Movement

Staff Special

CLEVELAND, Aug. 27.

SHIPMENTS of petroleum on the Great Lakes apparently are not keeping abreast the increased movement of petroleum products from United States refineries, although lake shipments of petroleum oils in 1925 were 17.4 per cent larger than in 1920, a year of active markets and poor rail transportation. Water shipping costs are much cheaper than rail costs.

In 1920, 808,378 short tons of petroleum and products were shipped from Great Lakes ports in the United States and in 1925 only 949,584 short tons were shipped. Gasoline made up almost all of the increased movement and kerosene slumped the most. The figures are those of the United States engineer, the war department official who has charge of navigable inland waterways.

Domestic and export shipments of gasoline, kerosene, and lubricating oils from United States refineries in 1925 were 77.2 per cent larger than shipments of the same commodities in 1920. Shipments on the Great Lakes of these commodities in 1925 were only 25.8 per cent larger than in 1920. Comparison is made of only these three commodities because the Bureau of Mines' method of keeping consumption statistics for them has not been changed but the method as to fuel oil has been altered.

The port of origin of the largest shipments, those of gasoline, was Indiana Harbor, Ind., the shipping point of the Standard Oil Co. of Indiana and the Sinclair Refining Co. In gasoline shipments in 1920, Toledo, O., the site of refineries of the Standard Oil Co. of Ohio, Sun Oil Co., Paragon Refining Co., and Craig Oil Co., ranked second but in 1925 second place went to Oswego, N. Y., a terminal of a branch of the New York barge canal which is used extensively by the Standard Oil Co. of New York. Gasoline and other oils are transhipped by the New York Standard at several points on Lake Ontario and the upper St. Lawrence river. The New York Standard is said to be the largest user of inland waterways of the United States for the movement of petroleum products.

The U. S. engineer's report indicates that the Standard of Indiana is the largest user among oil companies of the Great Lakes. The tonnage of gasoline received at Detroit was the largest of any Great Lakes port. From that city gasoline may be shipped by rail through southeastern Michigan. The combined port of Duluth, Minn., and Superior, Wis., ranked second as a receiving point. From there gasoline may be shipped by rail through Minnesota and northern Wisconsin. Muskegon, Mich., ranked third, Saginaw, Mich., fourth, and Green Bay, Wis., fifth in 1925.

Duluth-Superior was the largest receiving point for kerosene last year with Saginaw, Muskegon and Green Bay following in the order mentioned. The movement of lubricating and fuel oils is almost negligible, although it is possible that considerable packaged and barreled lubricants may be classified by port authorities as "miscellaneous merchandise."

There were classifications such as "petroleum oils," "mineral oils," and "refined petroleum" at several ports. These have been listed as "unspecified oils" in the accompanying tables.

Tonnage figures for shipments do not balance with tonnage figures for receipts. The differences probably represent shipments to Canadian ports, statistics for which are not kept by the U. S. engineer.

At 6.6 pounds a gallon, the gasoline tonnage figures indicate a total shipment in 1925 of 229,723,000 gallons. Total domestic and export shipments from United States refineries last year were 10,692,408,000 gallons, Bureau of Mines figures. Thus, the Great Lakes movement of gasoline was only 2.15 per cent of the total.

Shipments to Lake Superior ports are shown in reports for the St. Marys canal

Water Shipping Cost Much Less Than Rail Rate

COST of water transportation on the Great Lakes is much cheaper than rail transportation, as shown by cost of shipments from Indiana Harbor (Chicago) to Green Bay, Wis., and Muskegon, Mich., in U. S. engineers' reports. The water route from Indiana Harbor to Green Bay is 268 miles and gasoline transportation last year cost 0.46 cent per ton mile. The rail rate from Chicago to Green Bay is 17.5 cents per hundred or $3.50 per ton. Figuring the mileage the same the per ton rail rate to Green Bay was 1.3 cents, almost three times as much.

To Muskegon from Chicago the water route is 126 miles long. The water per ton rate was 0.6 cent while the rail rate, at 24.5 cents a hundred was 3.9 cents, or more than six times as much.

Because gasoline and other oils were carried to Duluth and Detroit in oil company vessels per ton mile transportation costs were not given in the U. S. engineer's report.

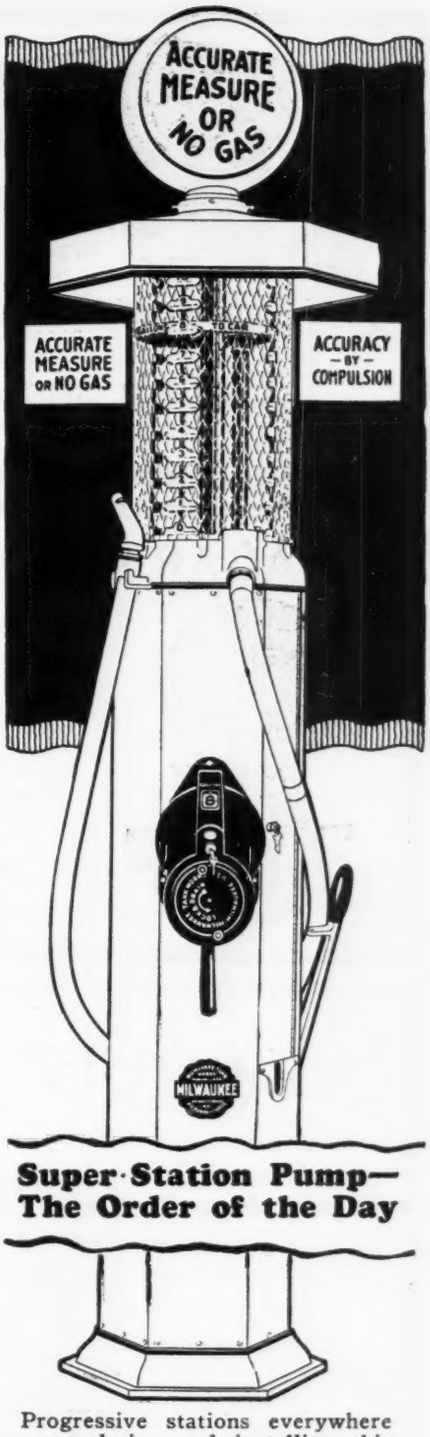
between Superior and Huron. In 1925 the canal tonnage for all petroleum products, all westbound, was 222,575 but in 1920 it was 353,489 and in 1919 287,023. Passage through the canal costs $1.25 per ton.

Petroleum Shipments from Great Lakes Ports

Port	1925 Volume (Short Tons)	1925 Value	1920 Volume (Short Tons)	1920 Value
Indiana Harbor, Ind.	730,030	$26,047,611	520,179	$30,929,591
Toledo, O.	2,138	72,366	22,412	1,095,903
Oswego, N. Y.	25,277	834,157	.....	.....
Alexandria Bay, N. Y.	104	6,268	.....	.....
Clayton, N. Y.	9	520	.....	.....
Green Bay, Wis.	58	2,760	506	18,000
Sandusky, O.	470	18,213	.....	.....
Duluth, Minn.	.....	.....	334	26,750
Charlevoix, Mich.	.....	.....	40	2,300
Total Gasoline.	758,086	$26,981,895	543,471	$32,072,544
KEROSENE				
Indiana Harbor, Ind.	98,206	$ 2,062,326	143,625	$ 6,067,078
Duluth, Minn.	.....	.....	5,790	208,415
Green Bay, Wis.	25	800	.....	.....
Buffalo, N. Y.	4,600	180,550	.....	.....
Oswego, N. Y.	9,566	315,700	.....	.....
Alexandria Bay, N. Y.	32	1,460	.....	.....
Sackett's Harbor, N. Y.	370	12,210	.....	.....
Total Kerosene.	112,799	$ 2,573,046	149,415	$ 6,275,493
LUBES				
Duluth.	.....	.....	2	331
Kewanee, Mich.	.....	.....	121	16,726
Buffalo, N. Y.	186	$ 28,412	.....	.....
Rochester, N. Y.	842	126,300	.....	.....
Total Lubes.	1,028	$ 154,712	123	$ 17,057
FUEL OIL				
Toledo, O.	.....	.....	29,193	$ 778,479
CRUDE OIL				
Toledo, O.	24,425	$ 421,331	41,500	$ 1,088,260
Cleveland, O.	9,621	130,871	.....	.....
Buffalo, N. Y.	25,658	1,007,077	.....	.....
Total Crude.	59,704	$ 1,559,279	41,500	$ 1,088,260
UNSPECIFIED OILS				
Warroad, Minn.	46	$ 7,084	.....	.....
Port Huron, Mich.	10,181	253,982	.....	.....
Detroit, Mich.	18	450	.....	.....
Cleveland, O.	3,442	518,786	38,174	$ 1,870,526
Erie, Pa.	4,280	653,770	.....	.....
Buffalo, N. Y.	.....	.....	5,502	269,598
Total Unspecified.	17,967	$ 1,404,072	43,676	$ 2,140,124
Grand Total.	949,584	$32,673,004	808,378	$42,371,957

Petroleum Receipts at Great Lake Ports

Port	1925 Volume (Short Tons)	1925 Value	1920 Volume (Short Tons)	1920 Value
GASOLINE				
Duluth-Superior.	145,836	$ 5,833,440	280,976	$22,515,516
Green Bay, Wis.	44,312	1,772,480	25,700	1,200,000
Muskegon, Mich.	122,716	4,847,280	41,000	2,108,000
Saginaw, Mich.	76,636	2,596,417	.....	.....
Detroit, Mich.	243,232	8,513,120	1,942	776,800
Put-in Bay, O.	273	9,245	.....	.....
Kelley's Island, O.	208	7,040	.....	.....
Bass Islands.	80	2,697	.....	.....
Oswego, N. Y.	2,776	91,624	.....	.....
Ogdensburg, N. Y.	9,333	382,006	.....	.....
Sackett's Harbor, N. Y.	14,200	468,600	.....	.....
Clayton, N. Y.	4,222	151,992	.....	.....
Baudette, Minn.	.....	.....	444	35,568
Grand Marais, Mich.	.....	.....	529	41,102
Grand Portage, Minn.	.....	.....	1	80
Cornucopia, Wis.	.....	.....	37	2,964
Alpena, Mich.	.....	.....	6	450
Total Gasoline.	663,824	$24,675,941	350,635	$26,680,480
KEROSENE				
Duluth-Superior.	23,622	$ 619,944	81,862	$ 4,368,830
Green Bay, Wis.	12,621	330,670	14,650	335,000
Muskegon, Mich.	16,278	418,350	7,300	212,600
Saginaw, Mich.	18,936	379,125	.....	.....
Oswego, N. Y.	1,633	53,900	.....	.....
Ogdensburg, N. Y.	1,377	41,000	.....	.....
Sackett's Harbor, N. Y.	4,617	152,361	.....	.....
Cornucopia, Wis.	.....	.....	10	507
Total Kerosene.	79,084	$ 1,995,350	103,822	$ 4,916,937
LUBES				
Duluth, Minn.	.....	.....	300	$ 41,400
Kewenaw, Mich.	17	$ 2,618	244	33,672
Kelley's Island, O.	89	13,350	.....	.....
Harbor Beach.	.....	.....	12	5,700
Total Lubes.	106	$ 15,968	556	$ 80,772
FUEL OIL				
River Rouge, Mich.	4,209	$ 93,328	.....	.....
UNSPECIFIED OILS				
Cleveland, O.	.....	.....	1,853	$ 89,797
Detroit, Mich.	25,484	$ 560,648	.....	.....
Buffalo, N. Y.	1,963	77,048	.....	.....
Tonowanda, N. Y.	8,319	326,521	.....	.....
Grand Marais, Mich.	826	28,541	.....	.....
Warroad, Minn.	27	4,158	.....	.....
Grand Portage, Minn.	7	1,078	.....	.....
Total Unspecified.	36,626	$ 997,994	1,853	$ 89,797
Grand Total.	783,849	$27,778,581	456,866	$31,767,986



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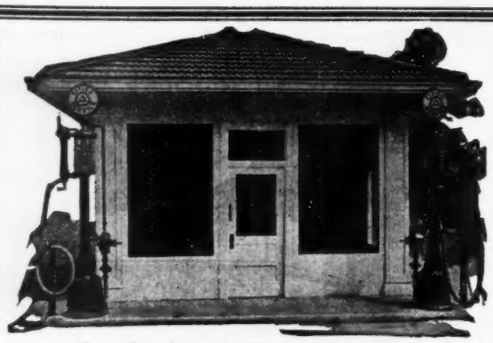

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Natural Bridge and Goodfellow

St. Louis, U. S. A.

New Oil Station Construction

Benton, Ill.—Diamond Petroleum Co., Carlinville, Ill., will erect filling station, and is now completing bulk station here.

* * *

Leavenworth, Kans.—Property for filling station has been purchased by Standard Oil Co. of Indiana.

* * *

Smithwick, S. D.—Smithwick Oil Co. is building service station, according to L. E. Baltzly, owner.

* * *

Middletown, O.—Palmco Oil Co., new marketer here, will build filling station on Tytus Ave.

* * *

Dubuque, Ia.—Paul Mathis, proprietor of Pam Oil Co., bought property for filling station.

* * *

Girard, Ill.—Service station is being completed here by Standard Oil Co. of Indiana.

* * *

Ithaca, N. Y.—Standard Oil Co. of New York seeks permit for filling station.

* * *

Corydon, Ia.—A filling station will be built here by Standard Oil Co. of Indiana.

* * *

Edison, Ga.—Standard Oil Co. of Kentucky purchased site for filling station.

* * *

Hugo, Okla.—Marland Oil Co., Ponca City, is building filling station here.

* * *

Glasgow, Mont.—E. W. and B. C. Mattson building filling station.

* * *

Central City, Neb.—A. T. Forsell seeks permit for filling station.

* * *

Red Lake Falls, Minn.—Ted Harris purchased property for filling station.

* * *

McGhee, Ark.—Magnolia Petroleum Co. completing filling station.

* * *

Devils Lake, N. D.—Home Oil Co. completing service station.

* * *

Woodland, Kans.—Dizmang & Smith completing filling station.

* * *

Monticello, Ark.—Pierce Oil Corp. building service station.

* * *

San Marcos, Tex.—M. L. Arnold completing service station.

* * *

Shiner, Tex.—The Texas Co. is completing filling station.

* * *

Menomonie, Wis.—J. A. McClellan to build filling station.

* * *

Lostant, Ill.—N. F. Patterson to build filling station.

Here & There

National Petroleum News

Earl Coryell, of Lincoln, Neb., married Miss Margaret Stidworthy on Aug. 12 at the Trinity Episcopal church. L. L. Coryell, Jr., who is Mr. Earl Coryell's cousin, was best man.

Mr. and Mrs. Coryell left immediately after the wedding reception, for Alaska. They will make their home at Lincoln, according to the "Weekly Nioma Service Bulletin," official organ of the Nebraska Independent Oil Men's Association, Lincoln.

* * *

A. W. Peterson, secretary and treasurer of the Commerce Petroleum Co., Chicago, recently returned from a two weeks' auto trip around Lake Michigan and reports a pleasant trip. Mr. Peterson states that Wisconsin roads are best, but Michigan traffic seemed to be larger, while honors as to scenery along the highways are about equally divided. Gasoline business seemed good at all points, he said.

* * *

Raymond F. Fleishmann, general manager of the Republic Oil Co., Rosselyn, Va., and Washington, D. C., was appointed to his present position on June 1. He entered the employ of the company four years ago as salesman, then was placed in charge of the lubricating department, was later made manager and is now general manager.

* * *

J. R. Holmes, agent for the Sinclair Refining Co. at Clinton, Iowa recently broke his left leg and has been confined to the hospital, writes Howard B. Holmes of Waterloo, his brother. He is steadily improving and hopes to be up and around in another few weeks.

* * *

Messrs. Drabing and Ellis have assumed the agency for the Indian Refining Co. station at Huntingburg, Ind. Mr. Drabing is the owner of several garages in French Lick and West Baden. Mr. Ellis comes from Paoli, Ind.

* * *

C. M. Linthicum, formerly of the bulk sales department of Sinclair Refining Co., has been made eastern representative for the Deepwater Oil Refineries Inc., Houston, with headquarters at Baltimore.

* * *

Harry D. Blair has become sole owner of The Liberty Oil Co. of Lamar, Mo., having bought out his former partners Roy A. Arft and the Detwyler Bros.

* * *

J. K. Murphy, a veteran with the Texas Co., has joined the staff of the Sun Oil Co. at Philadelphia and will handle the jobbing trade in eastern Pennsylvania.

R. T. Colquette, superintendent of the Wynnewood, Okla. refinery of the Texas Pacific Coal & Oil Co., with headquarters at Fort Worth, Tex., has been promoted to the superintendency of the company's Fort Worth refinery, succeeding A. H. Mayo.

T. A. Pomeroy, formerly assistant superintendent of the Wynnewood refinery, has been promoted to superintendent succeeding Mr. Colquette, according to E. R. Lederer, vice president.

* * *

J. B. Whitney, Jr., formerly chemist for the Pennsylvania Petroleum Co., Kansas City, Mo., is now chief chemist and lubricating engineer for the Winters Oil Co., Kansas City, Kan. The Winters Oil Co. have exclusive rights on a process of Mr. Whitney's for making a non-chatter Ford oil.

* * *

B. G. Shepard, president of the Inter-State Oil Co., Kansas City, and his wife have sailed Aug. 21 on the steamship "Caronia" for five weeks tour of England, France and Switzerland. Mr. Shepard served nineteen months overseas during the World War and intends to visit places he had been in during his service.

* * *

Frederick S. Bacon, formerly president of the Puritan Dye & Chemical Co., has joined the organization of Arthur D. Little, Inc., chemists, engineers and managers, at Cambridge, Mass.

* * *

O. W. Thomas Sr., of the Thomas Auto Service Station, Nashville, Tenn., has recovered from an illness of seven months, and has again become active in the affairs of his company.

* * *

H. A. Frederick, until recently sales-manager of the Gilmer Oil Co., Ardmore, Okla., has opened an office in Tulsa and will buy refined products for several accounts.

* * *

C. J. Hares, geologist for the Ohio Oil Co., was recently married to Miss Harriet Leonard, Dallas, Texas. Mr. Hares is now in Mexico on business.

* * *

Clyde Show has taken the agency of the new station of the Fletcher Oil Co., at Pendleton, Ore. and will handle Veltex gasolines and oils.

* * *

J. W. Elsbury, chief scout of the Mar-land Oil Co. of Texas, is spending his vacation with relatives in Houston.

* * *

H. E. Poole, general manager of the Poole Oil & Gas Co., Rexburg, Ida., is spending two weeks at Lava Hot Springs.

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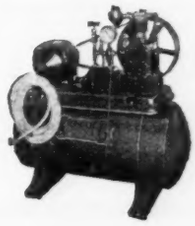

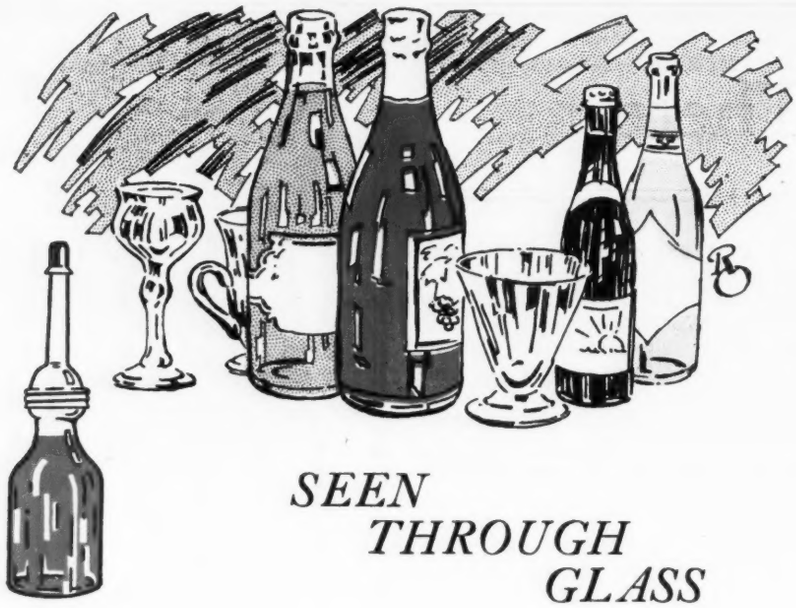

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Oil Patents Issued Recently

Production

Water Swivel for Rotary Drilling.—Lee J. Black, Beaumont, Tex. Filed June 9, 1923. No. 1,596,144.

Hydraulic Pumping System.—Lee J. Black, Beaumont, Tex. Filed Nov. 14, 1925. No. 1,596,145.

Swab.—Lawrence W. Colton, Joseph La Porte, and Theodore W. Cooke, Long Beach, Cal., said La Porte assignor to said Colton and said Cooke. Filed Oct. 12, 1923. No. 1,596,155.

Back-Pressure Valve.—Alexander Thomson, Sour Lake, Tex. Filed Mar. 6, 1926. No. 1,596,260.

Deep-Well Displacement Pump.—Snowden B. Redfield, Easton, Pa., assignor to Ingersoll-Rand Co., Jersey City, N. Y. Filed Apr. 22, 1926. No. 1,596,303.

Elevating Tool.—Lincoln Fielding, Oxnard, Cal. Filed Sept. 28, 1925. No. 1,596,343.

Swab.—William Walter Hartman, Los Angeles, Cal. Filed Apr. 27, 1925. No. 1,596,353.

Rotary Machine.—Lewis E. Zerbe, Moneta, Cal., assignor to Union Tool Co., Torrance, Cal. Filed Mar. 3, 1924. No. 1,596569.

Process for Breaking Water-In-Oil Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Dec. 23, 1924. No. 1596,569.

Process for Treating Water-In-Oil Emulsion.—Melvin De Groote, St. Louis Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Dec. 23, 1924. No. 1,596,586.

Treatment of Water-In-Oil Emulsions.—Melvin De Groote, St. Louis, Mo. assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Dec. 23, 1924. No. 1,596,587.

Process for Treating Water-In-Oil Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Dec. 23, 1924. No. 1,596,588.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Apr. 6, 1925. No. 1,596,589.

Process for Breaking Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel Co., Webster Groves, Mo. Filed May 29, 29, 1925. No. 1,596,590.

Process for Breaking Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed May 29, 1925. No. 1,596,591.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 1, 1925. No. 1,596,592.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, and assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 1, 1925. No. 1,596,593.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, and Wilbur C. Adams, University City, Mo., assignors to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 1, 1925. No. 1,596,594.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, and Wilbur C. Adams, University City, Mo., assignors to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 1, 1925. No. 1,596,595.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 7, 1925. No. 1,596,596.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo., assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 7, 1925. No. 1,596,597.

Process for Treating Petroleum Emulsions.—Melvin De Groote, St. Louis, Mo.,

assignor to Wm. S. Barnickel & Co., Webster Groves, Mo. Filed Oct. 7, 1925. No. 1,596,598.

Pumping Apparatus.—August L. Segelhorst, Whittier, Cal., assignor to Standard Oil Co., San Francisco, Cal. Filed Nov. 8, 1924. No. 1,596,630.

Refining

Heat Exchanger.—Edwin C. Weisgerber, Long Beach, Cal. Filed Feb. 18, 1924. No. 1,596,383.

Prevention of Evaporation.—Robert E. Wilson, Chicago, Ill., assignor to Standard Oil Co., Whiting, Ind., and Chicago, Ill. Filed May 4, 1923. No. 1,596,385.

Petroleum Still.—Lemuel J. Husted, Los Angeles, Cal., assignor of one-half to F. L. Rounsevell, Los Angeles, Cal. Filed Mar. 4, 1920. No. 1,596,660.

Miscellaneous

Tar-Distillation Apparatus.—Heinrich Koppers, Essen-Ruhr, Germany, assignor to The Koppers Development Corp., Pittsburgh, Pa. Filed July 6, 1921. No. 1,596,050.

Manufacture of Carbon Black.—Walter O. Snelling, Allentown, Pa. Filed Apr. 23, 1925. No. 1,596,070.

Waterproof Joint Between Sheet Metal Tanks and External Objects.—Edwin Arnold, Chicago, Ill., assignor to Oil Products Appliance Co., Maywood Ill. Filed Jan. 9, 1924. No. 1,596,227.

Briquette and Process of Making The Same.—John P. Delzeit, Tamaqua, Pa., assignor to The Lehigh Coal and Navigation Co., Philadelphia, Pa. Filed Dec. 4, 1925. No. 1,596,239.

Gasoline Storage Tank for Filling Stations.—Alvah M. Griffin, Kansas City, Mo.; assignor of one-half to Andrew A. Kramer, Kansas City, Mo. Filed June 2, 1924. No. 1,596,526.

Binder for Coal Briquettes and The Like.—Wladislaus Rakowski, Philadelphia, Pa. Filed June 2, 1923. No. 1,596,624.

Empire Enters Utah

NEW YORK—Empire Gas & Fuel Co. has made location for its first well in Utah. It is in Sec. 6-30S-21E, in San Juan county. The company holds government permit on 2560 acres here and the structure is known as Gibson dome. The test is known as No. 1 Kimball. The nearest railroad station is Thompson, 135 miles away and material can be brought by truck to within 25 miles of the test, from that point being hauled by teams.

Commonwealth Buys Seneca

CLEVELAND Aug. 26.—The Commonwealth Oil Co., Aug. 1 purchased the properties of the Seneca Oil Co., also of Cleveland, according to E. A. Mebel, president of the former company. The sale included the 12 drive-in stations of the company, trucks, curb pumps and its bulk storage plant at 2500 W. Third St. The Commonwealth company is increasing the storage and facilities at this plant and is to move its headquarters to this property from its present location on W. Fourth St.

ST. JOSEPH, MO.—A big chicken dinner was the reward for employes at the close of a Red Hat coupon book campaign conducted by the Central Oil Co. here the later part of June. The campaign was a success, according to Rupert Cox, president.

— write for a copy of the new TELESCOPER working model —

ECONOMY LIFTERS

Stackers — Tiering Machines —Portable or Stationary

Economy Engineering Co.

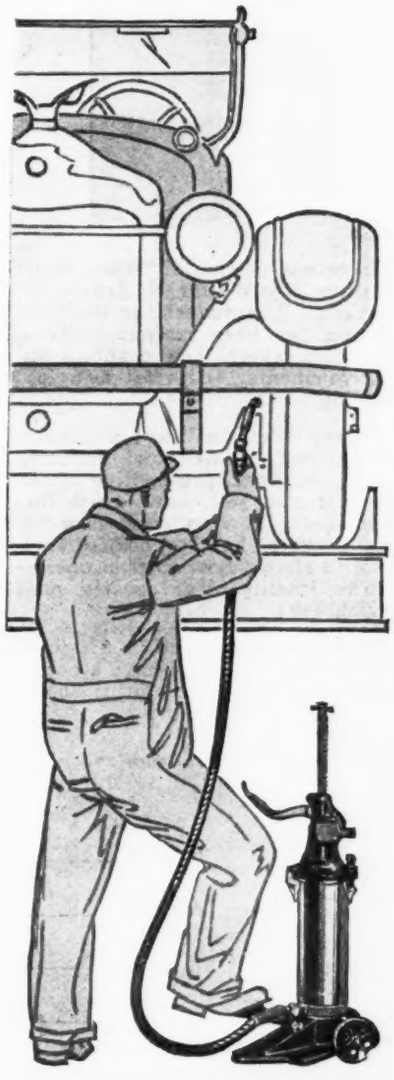
2687 W. Van Buren St., Chicago

342 Madison Ave., New York

BALCRANK

TRADE MARK REG. U. S. PAT. OFF.

High Pressure Lubricator



Simply step on the pedal. The weight of the body generates up to 10,000 pounds pressure. Both hands are free to handle the hose. Uses any grade of light or heavy grease regardless of climatic conditions. One shot is sufficient to clean and lubricate the average bearing. The adaptors for various systems can be changed in a jiffy. A special hose covering reduces hose breakage.

The Balcrank High Pressure Lubricator saves time and labor, which can be added to profits.

Splendid resale proposition for marketers. The Balcrank Lubricator sells on sight, and discounts are liberal. Write us at once for proposition.

THE CINCINNATI BALL CRANK COMPANY

CINCINNATI OHIO

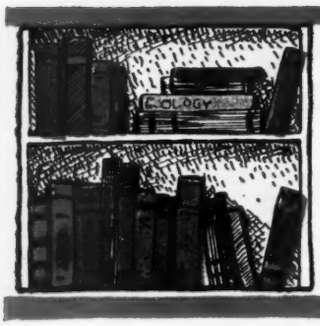
The Cincinnati Ball Crank Co.,
4807 North St., Cincinnati, Ohio
Please send me complete information on your new Type "D" High Pressure Lubricator.

Name .....

Address .....

City and State .....

Business .....



Oil Man's Bookshelf

A successful department head remarked the other day:

> **"I find it necessary to keep up a constant program for *self improvement* in order to prevent my becoming obsolete so far as my value to my company is concerned."**

And to the study of the best books on his work, he attributed a good share of his advancement.

The OIL MAN'S BOOKSHELF will help you select books on oil that you can read with the greatest profit. If you do not find the subject you are interested in below, write us.

ACCOUNTING for the PETROLEUM INDUSTRY

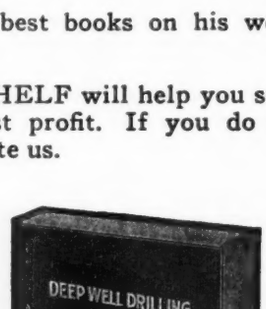
"Accounting for the Petroleum Industry" by D. F. Morland and R. W. McKee, is one of the most practical and comprehensive works on accounting principles and procedure for all branches of the oil industry — production, transportation and storage, refining, marketing.

Accounting for each branch is discussed separately; description of technical practices is given, and the accounting problem to be solved in each activity is set forth together with sample forms in use; tables for depreciation rates, etc.

For refinery accounting this book recommends the "weighted selling ratio method" which is described in detail and which has the advantage of determining for every product a cost which will allow for a reasonable profit when disposition is made thereof.

"Accounting for the Petroleum Industry" is carefully prepared and the most practical book written on the subject of accounting for the oil business.

304 pages—Price $4.00



The second edition of "Deep Well Drilling" by Walter H. Jeffery is just out. The material in the first edition has been rewritten thruout with several new chapters on improvements in the art of drilling.

"Deep Well Drilling" discusses exhaustively cable tool drilling, rotary drilling, core drilling in all their phases; tells how to fish for lost tools; how to case, how to use packers, how to cement and how to shoot; how to plan operations intelligently; specify material, etc.

Every man engaged in the production of oil should have a copy. 648 pages, illustrated, price $6.00.

RECOVERY of GASOLINE from NATURAL GAS

A glance over a few of the chapter headings indicates how thoroughly the author, George A. Burrell, goes into the subject of "Recovery of Gasoline from Natural Gas" in his new book:

Occurrence of gasoline in natural gas—Applying "vacuum" to wells—Gas leases—Chemistry and analysis of natural gas—Testing for gasoline content—Measuring—Gas carrying capacity of pipe lines—Compression method—Absorption process—Charcoal process — Extraction from Residue gas—Blending—Fractionating columns — Depletion—Removal of Hydrogen-Sulfide—Sulfur—Relation between vapor tension and distillation loss — Shipping losses — Gasoline loading apparatus — Insulating gasoline storage tanks—Accidents in transporting—Hazards in gasoline plants—Gas engines and compressors—Horse power required to compress — Steam boilers — Steam engine — Pumps used in gasoline recovery—Water cooling systems — Pipe for natural gas plants—Tanks—Regulators, relief valves, traps, thermostats, meters—Construction and operating costs of plants—Fuel economy—Depletion of properties—Other motor fuels than gasoline—Testing gasoline—etc.

590 pages, 210 illustrations, price $7

— — — — — — — — — — — — — — — — — — *Cut out and mail* — — — — — — — — — — — — — — — — —

National Petroleum News,
864 Caxton Bldg., Cleveland, Ohio.

I want the books checked below. Enclosed is check or money order for $_____

☐ *Accounting for the Petroleum Industry* by R. W. McKee $4.
☐ *Deep Well Drilling* by W. H. Jeffery $6.00.
☐ *Recovery of Gasoline from Natural Gas* by G. A. Burrell $7.

NAME _____

Address _____

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ON THE LAZY BENCH

National Petroleum News

Marred, Not Married

Rastus was looking for work and the employer was asking him the usual questions.

"What's your name?"

"Erastus Jackson, suh."

"How old are you?"

"Ah is twenty-nine yeahs, suh."

"Are you married?"

"No suh. Dat scar on ma head is where a mule done kicked me."

—Magnolia Oil News

◈ ◈ ◈

Extensive Knowledge

Motorist: "It's preposterous. I'm an expert driver. What I know about driving would fill a book."

Policeman: "And what you don't know would fill a hospital. Give me your name and address."

—Independent Topics

◈ ◈ ◈

Truth is Stranger than Fiction

Singleton—"They have machines now that can tell when a man is lying. Ever seen one?"

Wedmore—"Seen one? By gosh, I married one."

—Independent Topics

◈ ◈ ◈

Clerk (arousing guests): "Get up! Get up! The hotel's afire!"

Thrifty Scot: "Right, laddie! But if I do, mind ye, I'll no pay for the bed."

—Selling Skelly Service

◈ ◈ ◈

Farmer: "Don't you see that sign, 'Private—No Hunting Allowed.'"

Hunter: "I don't read anything marked 'private.'"

—The Atlantic Seal

◈ ◈ ◈

Same Boat

Employee (removing his hat and coat at 9:30)—"Er—good morning, sir."

Boss (doing likewise)—"Late again."

Employee—"So am I."

—The Marion Line

◈ ◈ ◈

Adam made a world's record that has never been broken when he came in first in the human race.

◈ ◈ ◈

Passenger: "Oh, captain, I am so seasick I don't know what to do."

Captain: 'Don't worry, madam, you'll know shortly."

—The Atlantic Seal

◈ ◈ ◈

Bella: " Have you ever met the only man you could be happy with?"

Della: "Oh, lots of them!"

Could Add, But No Musician

A teacher of music was trying to impress upon her pupils the meaning of f and ff in a song that they were about to learn.

After explaining the first sign, she said:

"Now, children, what do you say; if f means forte, what does ff mean?"

"Eighty!" shouted one enthusiastic pupil.

—Independent Topics

◈ ◈ ◈

As A Matter of Record

Rastus—"Yo' done said yo' could lick me."

Jasper—"Umhum, I sho' did; want to see me demonstrate?"

Rastus—"No, I's jus' gathering statistics."

—The Marion Line

◈ ◈ ◈

Not In Her Day

Grandma (looking up from paper)—"It says here that young women are abandoning all restrictions. Now, mind, don't let me catch you goin' out without yours, Ethel!"

—Magnolia Oil News

◈ ◈ ◈

Young Wife: "John, is it true that money talks?"

Hub: "That's what they say, my dear."

Young Wife: "Well, I wish you'd leave a little here to talk to me during the day. I'm getting lonesome."

—The Pure Oil News

◈ ◈ ◈

Ought to Watch the Dates

Bosh—"Where's the funny paper?"

Gosh—"Funny paper! Today ain't Sunday. I told you not to take that bath last night."

—Independent Topics

◈ ◈ ◈

"Do you know where the little boys go who don't put their Sunday School money in the plate?"

"Yes," replied the little boy, "to the movies."

◈ ◈ ◈

Sambo: "Wus yuh sick wit' de flu, Rastus?"

Rastus: "Man, I was so sick dat mos' ev'ry night ah looked in de casualty list fo' mah name."

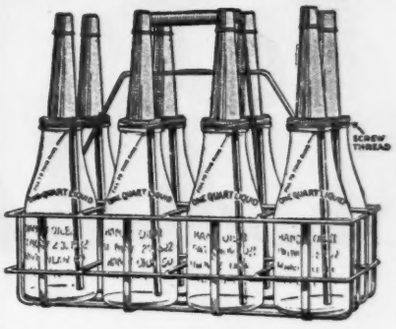
—The Atlantic Seal

◈ ◈ ◈

By an open grave the mourners kneel,
He was holding his cutie instead of the wheel.

—The Ventura Mission

The Handy Oiler



THE public today demands that you give them quick, clean service. This you can do by dispensing your lubricating oils with Handy Oilers, and improve the most valuable asset to your business, "Service".

Handy Oilers are marked to pass the inspection of the Division of Weights and Measures in each state where sold.

These prices are subject to the regular discounts.

LIST PRICES

Complete Outfit	$10.00
Handy Oiler Container and Spout	1.00
Basket	2.50
Metal Spout and Breather Pipe	.60
Glass Container Only	.45
Gasket	.05
Dust Cap	.10

Manufactured by

Handy Oiler Co.

Danville, Indiana

Purchase from your jobber if possible. If he will not supply you, we will ship direct.

Something New in Cases

The bottles are held securely at the bottom by a narrow ledge, and at the top by a spring clip around their neck. There is a partition between each bottle which eliminates any chance of breakage and scratched labels.

The case itself has a stiff box frame, covered with smooth black cowhide, French sewed at edges, and lined with red velvet. Contains fourteen 4 oz. cut-bottom bottles with metal capped corks and ten ½ oz. squat grease jars held by adjustable bar. 209 Complete, with your name embossed in gold, only $15.75

Less 10% for cash.

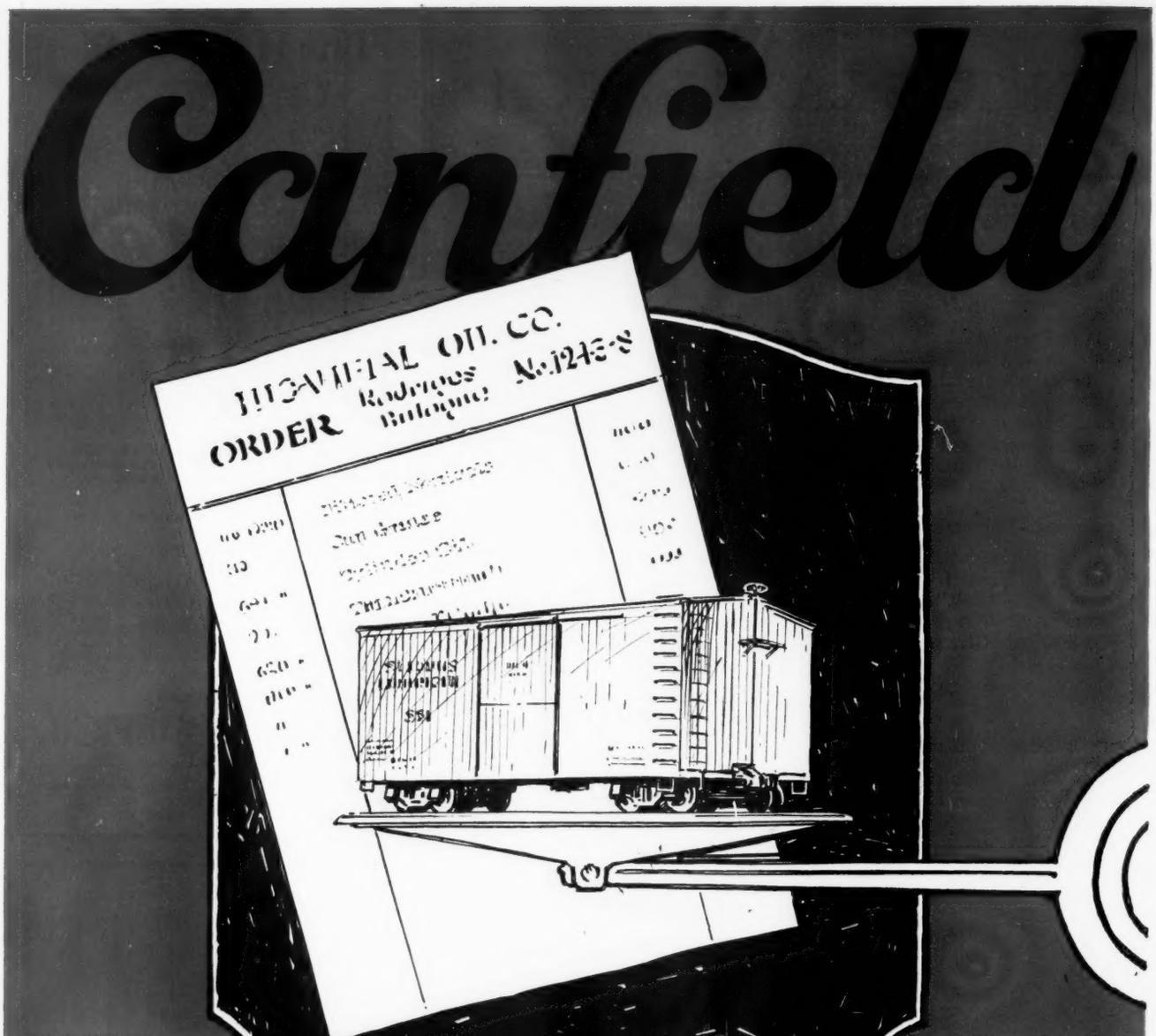
Other Styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware KANSAS CITY, MO.

Canfield



Balance your sales—*and keep bigger profits coming!*

YOUR wife wouldn't enjoy having to go to one grocery for sugar, to another for flour, and to a third for canned goods—simply because no one of them carried a complete stock. Maybe *your* customers would appreciate being able to buy more of their requirements at one place, too!

You *can* take complete care of them to their satisfaction and your profit—with Canfield Assorted Carlots. It's a business-like, direct way to buy:—just check the list at the right, make up specifications covering the Oils, Greases and Specialties most in demand among your own customers, and mail it to Canfield for estimate.

The combined volume will entitle you to quantity prices: that means ***extra profits*** on each resale you make.

The carlot will go straight through to you: that ***saves money*** by assuring lowest freight rates, and ***saves time*** by effecting prompt delivery.

You can depend upon the quality of each product in the car, because it's all Canfield. You know that Canfield Quality is rigidly maintained.

Refinery - Tank Wagon Markets

National Petroleum News

Elimination of Distress Gasoline In North Texas Strengthens Group 3 Markets

Staff Special
TULSA, Aug. 28.

A DEFINITE improvement in Mid-Continent gasoline markets has been apparent in the past two or three days with some tendency towards a higher price level. Much of the gasoline that was offered at low prices to encourage buying, has been taken up and confidence in the price structure has been restored.

Aided by the tank wagon advances in the Mid-Continent trade territory, kerosenes have advanced to a higher price level with no apparent increase in the amount of oil available for shipment. Stove distillates have moved upward fractionally in sympathy with kerosene.

Fuel oil business has continued to feature the market. Active buying has driven prices up another 5 cents a barrel on the average.

Oklahoma gasoline markets have been relatively firm all week. Refiners in this area have found themselves in a good position with low stocks of finished gasoline and a normal business. It appears probable that the market would have advanced to a firm 11-cent level for 58-60 U. S. Motor gasoline if it had not been for low priced competition from other areas.

The lack of export buying of gasoline from north Texas refiners has been the chief cause of soft gasoline markets in the Mid-Continent during August. Normally most of the surplus gasoline produced in north Texas is moved into export channels. But during the past month exporters have been virtually out of the market.

Export Slump Expected

THE slump in export buying has not been unexpected by those who have followed the statistics of exports during the early months of the year. During the first four months of the year there was an astonishing amount of gasoline moved from the United States to its foreign customers.

An analysis of shipments to Great Britain, for example, shows that during the first four months of 1926 U. S. refineries shipped 188,738,698 gallons to that country compared with 105,295,389 gallons during the same months of 1925. The increase this year was 79.25 per cent. Remarkable increases are shown in exports to France, Italy and other foreign countries although the gallonage is not so impressive as in the case of England.

Undoubtedly foreign buyers were accumulating gasoline far in excess of their current requirements. In the case of England, the impending general strike probably had a great deal to do with the rush of buying.

The Mid-Continent field enjoyed a large share of the export business when it was so brisk. Shipping reports show that the largest increases in shipments were made from Gulf and California ports with only minor increases from Atlantic ports.

Seeking New Outlet

WHEN demand for export gasoline fell to a low level in late July and in August, refiners in north Texas began to find it necessary to find a new outlet for their surplus gasoline. They began moving the goods north and east in competition with Kansas, Oklahoma, Arkansas and Louisiana gasoline.

Having been engaged in the export business so long, north Texas refiners found that it was difficult for them to move their goods to the jobbing trade except through price concessions. Their gasoline was not so well known to the trade as that produced by plants catering almost exclusively to the domestic trade and business could be produced in volume only at the sacrifice of price.

During the last week some refiners in north Texas have offered gasoline on a basis at least ½ cent below the selling price of the most important Oklahoma refiners. Texas 58-60 gasoline has been freely offered at 10½ cents, Group 3 basis, and some reports have been current of offerings as low as 10⅜ cents, Group 3, or 10¼ cents north Texas.

Brokers have been specializing in Texas gasoline because of the low prices and as a result refiners in that area have sold a tremendous amount of gasoline. It is reported today that most refiners are now fairly well taken care of with orders.

Some low priced gasoline has been available in Arkansas and north Louisiana as well. Arkansas refiners are getting well sold up and the weakest spot in the Mid-Continent today appears to be in Louisiana.

Natural gasoline has gained additional strength and is difficult to obtain for prompt shipment in large quantities. Prospects appear good for the usual active fall market for naturals because some of the largest manufacturers have obligated the bulk of their September production and may be forced to buy some material to fill day to day spot orders. Grade A is firm at 10 cents with Grade B at 9¾ cents and Grade C unobtainable at any price. Most manufacturers are shipping Grade B or better on Grade C orders.

Crude Market

STABILITY of the crude price structure during the early fall has been an absorbing topic for discussion in refining circles. Mounting production of the country has given some concern until recently when there has been a rather definite change of sentiment.

Major purchasers of crude are reported to be delivering a little more oil to their customers than they are taking from their connections. There is no demand for stored oil at current prices but demand in this area at least appears to be about in balance with production.

The long distance weather prophets have observed the flight of birds toward their winter homes in recent weeks, have journeyed into the wilds and found the fur of various beasts to be thicker than normal and have issued the ponderous opinion that there will be an early winter. Possibly they will be as wrong as those other long distance prophets who rushed into print with the prediction that there would be no summer this year. When the temperature rose to 107 degrees in Tulsa recently there were some who came to the conclusion that perhaps we would have a little summer after all.

If the prophets are wrong and there is the usual heavy fall business it is entirely possible that demand for crude in the Mid-Continent may stay close enough to supply to maintain the present market through September and all or part of October. In recent years fall consumption has been almost as large as that in mid-summer. Tourists have found it much more pleasant to see America first when the days are cool than when it is around 100 in the shade with no shade available on either concrete or dust roads.

(Continued on page 101)

Dependable Source of Supply

From the Oil Well to the Jobber

BE SQUARE PRODUCTS

SUPER GAS

Wonder Motor Fuel

Knock Out Power In

Barnsdall Exclusive Product

3

MODERN REFINERIES

Barnsdall, Okla.
Wichita, Kansas
Okmulgee, Okla.

3

From the Oil Well to the Jobber

With our own Crude Oil your source of supply is dependable.

Wire, write or telephone

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Subsidiary Barnsdall Corporation

EXECUTIVE OFFICES
Petroleum Building
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New York, Pittsburgh, St. Louis, Kansas City, Omaha, St. Paul, Des Moines, Los Angeles, Wichita

Dependable Source of Supply

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Aug. 30	Prices Aug. 23	Prices Aug. 16
52-54 Naphtha	13 13½	12¾ 13	12½ 13
54-56 Naphtha	13¼-13½	13 -13¼	12¾ 13
58-60 Gasoline	13¼-13¾	13½-13¾	13¼-13½
60-62 Straight-run gasoline	13¾-14½	14 -14½	14 -14½
64-66 Straight-run gasoline	14½ 15	14½-15	14¾ 15¼
68-70 Straight-run gas. 350-360 E.P	15¼-15½	15¼-15½	-15½
68-70 Straight-run gas. 305-320 E.P.	19 -20	19 -20	19 -20
OKLAHOMA			
48-50 450 E. P. naphtha	-10¾	-10¾	10¾-11
50-52 450 E. P. naphtha	-10¾	-10¾	10¾-11
56-58 450 E. P. gasoline	10¾-10¾	10½-10¾	10¾-11
56-58 U. S. Motor gasoline	-10¾	-10¾	-11
58-60 450 E. P. gasoline	10½ 10¾	10½-10¾	10¾-11
58-60 U. S. Motor 437 E. P.	10¾ -11	10¾ 11	11 -11¼
60-62 400 E. P. gasoline	11¼ 11½	11¼ 11½	11½ 11¾
64-66 390 E. P. gasoline	*11½-11¾	*11½ 11¾	* 11¾
64-66 375 E. P. gasoline	*11¾ -12	*11¾-11¾	*11¾-12
68-70 350-360 E. P. gasoline	12 -12¼	12 -12¼	-12½
64-66 437 E. P. blend	-10½	-10½	-10¾
KANSAS*			
58-60 U. S. Motor gasoline	11¼-11½	11¼-11½	11½-11¾
*F. O. B. refinery Kansas destination.			
NORTH TEXAS			
48-50 450 E. P. naphtha	-10¾	-10¾	-10¾
56-58 450 E. P. gasoline	10¾ 10½	10¼-10¾	10⅜-10¾
58-60 450 E. P. gasoline	10½ -10⅝	-10½	-10¾
56-58 U. S. Motor gasoline	-10¾	10½-10⅝	10¾-10⅞
58-60 U. S. Motor gasoline	-10¾	10½ 10¾	10⅝-11⅛
64-66 390 E. P. gasoline	* -11¼	* 11¼	-11½
64-66 375 E. P. gasoline	*11¾-11½	11¾-11½	*11½-11¾
68-70 350-360 E. P. gasoline	12 -12¼	12 -12¾	12 -12¼
NORTH LOUISIANA			
58-60 U. S. Motor 437 E. P.	10¾-11	11 -11¼	11¼-11½
ARKANSAS			
58-60 450 E. P. gasoline	10½-10¾	-10¾	-11
58-60 U. S. Motor gasoline	10⅞ -11	10⅞-11⅛	-11¼
CALIFORNIA			
*54-58 U. S. Motor 437, E.P.	12 -12½	12 -12½	12 -12½
*58-61 U. S. Motor, 437 E.P.	-13	-13	-13
42-45 Engine distillate, 445-480 E.P..	9¼-10	9¼-10	9¼-10

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND
(F. O. B. Boston and Fall River)

58-60 U. S. Motor gasoline	-12⅜	-12⅜	-12¾

NATURAL GASOLINE

(Note: End point of all grades, not over 375° F.)

OKLAHOMA			
Grade Double A	-10	- 9¾	- 9¼
Grade A	-10	- 9¾	- 9¼
Grade Double B	- 9¾	9½- 9¾	- 9
Grade B	- 9¾	9½- 9¾	- 9
Grade C	- 9¾	- 9½	- 8¾

NOTE—Specifications adopted by Ass'n. of Nat. Gaso. Manufacturers
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH LOUISIANA			
*Grade Double A	-10½	10¾-10½	- 9¾
*Grade Double B	-10½	10 -10¾	- 9½
*Grade C	-10½	9¾-10	- 9¼
*F. O. B. Monroe District.			
NORTH TEXAS			
*Grade Double A	-10	- 9¾	- 9¼
*Grade A	-10	- 9¾	- 9¼
*Grade Double B	- 9¾	9½- 9⅝	- 9
*Grade B	- 9¾	9½- 9⅝	- 9
*Grade C	- 9¾	- 9½	- 8¾
*F. O. B. Breckenridge.			
CALIFORNIA			
75 85° 375-390 E. P.	15½-16	15½-16	15½-16
PENNSYLVANIA			
68-70 Grav. 437 E. P.	13½-14	13½-14	13½-14
64-66 Grav. 437 E. P.	13½-14	13½-14	13½-14
60-62 Grav. 437 E. P.	13½-14	13½-14	13½-14
68-70 Grav. 420 E. P.	13¾-14¼	13¾-14¼	13¾-14¼

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	10½ 10¾	-10¼	9¾-10
46 Water White Kerosene	10¾-11	10½-10¾	10¼ 10½
47 Water White Kerosene	11¼-11¾	11 -11¼	10¾-11
OKLAHOMA			
41-43 Water White Kerosene	- 9½	8¾- 9	8¾- 9
42-44 Water White Kerosene	* -10	* - 9½	- 9½
KANSAS			
41-43 w. w. kerosene	- 9¾	* - 9¾	* - 9¼
42-44 w. w. kerosene	10¾-10½	10 -10¼	*9½- 9¾

†Quotations only, no sales recorded.
*Prices nominal

NORTH TEXAS	Prices Aug. 30	Prices Aug. 23	Prices Aug. 16
41-43 Water White Kerosene	9 - 9¼	8½ 8¾	8¼- 8½
NORTH LOUISIANA			
41-43 Water White Kerosene	*9½-10	*9¼- 9¼	*8½- 8¾
ARKANSAS			
41-43 Water White Kerosene	9¼- 9¾	- 8½	8½- 8¾
CALIFORNIA			
38-40 Water White Kerosene	7½- 8	7½- 8	7½- 8
NEW ENGLAND			
**40-43 Water White Kerosene	-10¾	-10½	-10½

NEUTRAL OIL

PENNSYLVANIA			
(Viscosity at 70° F.)			
200 Vis. No. 3 Assoc. Filt	28½-29	28½-29	28½-29
180 Vis. No. 3 Assoc. Filt	26 -26½	26 -26½	26 -26½
150 Vis. No. 3 Assoc. Filt	23 -24	23 -24	23 -24
(Non-Viscous)			
34 Grav. 350-360 Flash	7¾ 8	7¾- 8½	7¾- 8¼
36 Miners Neutrals 300-305 Flash	7½- 7¾	7½- 7¾	7½- 7¾
OKLAHOMA			
(Viscosity at 100° F.)			
100 Vis. No. 2 color	7 - 7½	7- 7½	7 - 7½
150 Vis. No. 3 color	9¼-10	9 -10	9 -10
150 Vis. No. 4 color	- 9¾	- 9¾	- 9¾
180 Vis. No. 3 color	10½-11½	10½-11½	10½-11½
180 Vis. No. 4 color	10 -10½	9¾-10½	9¼-10½
180 Vis. No. 5 color	10 -10¼	10 -10¾	10 -10¾
200 Vis. No. 3 color	11 -12½	11 -12½	11 -12½
200 Vis. No. 4 color	-11½	-11½	-11½
200 Vis. No. 5 color	9¾-11¼	9¾-11¼	9¼-11¼
220 Vis. No. 3 color	12 -13½	12 -13½	12 -13½
220 Vis. No. 4 color	-13	-13	-13
220 Vis. No. 5 color	12 -12¾	12 -12¾	12 -12¾
240 Vis. No. 3 color	14 -15	14 -15	14 -15
240 Vis. No. 4 color	-14½	-14½	-14½
240 Vis. No. 5 color	13 -14	13 -14	13 -14
280 Vis. No. 3 color	16 -17	16 -17	16 -17
280 Vis. No. 4 color	-16½	-16½	-16½
280 Vis. No. 5 color	15 -16	15 -16	15 -16
300 Vis. No. 5-6 color	-17	-17	-17
GULF COASTAL			
(Viscosity at 100° F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	8½- 9	8 - 8½	8 - 8½
200 Vis. No. 3 Color Unfilt. Pale	11½ 12	11½-12	12 -12½
300 Vis. No. 3 Color Unfilt. Pale	12½ 13	12½ 13	13 -13½
500 Vis. No. 3½ Color Unfilt. Pale	14½ 15	14½-15	14½-15
750 Vis. No. 4 Color Unfilt. Pale	17½ 18	17½-18	18½-19
200 Vis. No. 5½ Color Red Oil	10 -10½	9½ 10	10 -10½
300 Vis. No. 5½ Color Red Oil	11½-12	11½ 12	11½-12
500 Vis. No. 6 Color Red Oil	12½-13	12½-13	12½-13
750 Vis. No. 6 Color Red Oil	16½-17	16 -16½	16½-17½
CALIFORNIA			
(Viscosity at 100° F.)			
100 Vis. No. 2 color	11 -11½	11 -11½	11 -11½
100 Vis. No. 3 color	8½- 9	8½- 9	8½- 9
200 Vis. No. 3 color	13½-14	13½-14	13½-14
300 Vis. No. 3 color	15 -15½	15 -15½	15 -15½
450 Vis. No. 3½ color	18 -18½	18 -18½	18 -18½
550 Vis. No. 3 color	20 -21	20 -21	20 -21
600 Vis. No. 3½ color	21 -22	21 -22	21 -22
100 Vis. No. 5 color	7 - 7½	7 - 7½	7 - 7½
200 Vis. No. 5 color	12 -12½	12 -12½	12 -12½
300 Vis. No. 5 color	13 -13½	13 -13½	13 -13½
400 Vis. No. 5 color	15 -16	15 -16	15 -16
500 Vis. No. 5 color	16 -17	16 -17	16 -17
600 Vis. No. 6 color	17 -18	17 -18	17 -18
700 Vis. No. 7 color	18 -19	18 -19	18 -19

CYLINDER STOCKS

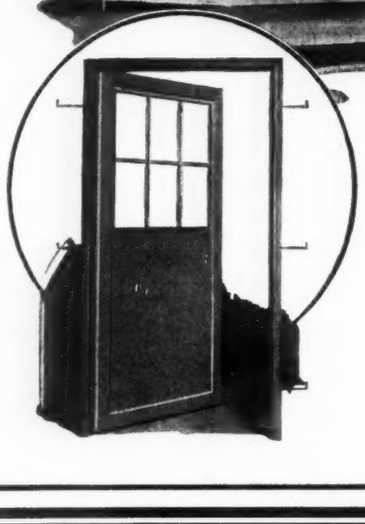
OKLAHOMA			
190-200 Vis. at 210° Bright Stock	31 -35	31 -35	31 -35
150-160 Vis. at 210° Bright Stock	28½-31	28½-31	28½-31
600 E Stock, 140-150 Vis. — 210°	-18	-18	-18
600 Steam Refined Olive Green	8 -11	8 -11	8 -11
600 Steam Refined Dark Green	6 - 8	6 - 8	6 - 8
Black Oil	5 - 6	5 - 6	5 - 6
Petroleum Coke (per ton)			82 to 85
PENNSYLVANIA			
(1-inch Immersion Test)			
600 Steam Refined	13 -13½	14 -14½	13½-14½
650 Steam Refined	18 -18½	19 -19½	19 -20
600 Flash	21 -22	22½ 23	22½-23
625 Flash	32 -33	32½ 33	32½-33
600 Warren E	20½-21	20½ 21	20 -20½
600 Oil City E	-19½	-19	19 -19½
600 D Filtered	-26½	26¼-26½	.....
Cold Test Stocks (bright filtered)	41 -42	41 -42	41 -42
Cold Test Stock (dark filtered)	39 -40	39 -40	39 -40

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

**Only one refiner quoting.
*Nominal.

Use TRUSCON Steel Doors for Safety and Permanence



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Make the doorways firesafe. All too often they are left unprotected, yet they are the most vulnerable points. You can have durable, fireproof, rust-resistant copper steel doors at no greater cost than for ordinary doors. And besides fire safety you gain permanence. Truscon Steel Doors always operate easily. They will not warp, swell or stick. Truscon Steel Doors are furnished in all the standard sizes as well as in special dimensions to meet your needs.

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Foreign Trade Division, New York.
The Truscon Laboratories, Detroit, Mich.
Trussed Concrete Steel Co. of Canada, Ltd., Walkerville, Ont.

TRUSCON STANDARD STEEL DOORS

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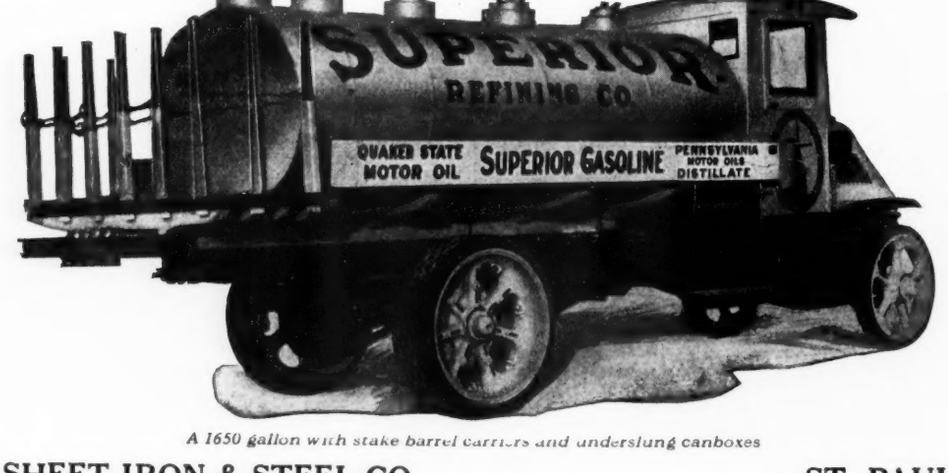

A 1650 gallon with stake barrel carriers and underslung canboxes

BROWN SHEET IRON & STEEL CO. **ST. PAUL, MINN.**

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We are interested in your tanks. Send your catalog and prices.

Make of Truck..... Size Tank Required.....

Other equipment on which you may send prices.....

Name..... Address.....

Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices Aug. 30	Prices Aug. 23	Prices Aug. 16
	(Per Pound, New York)		
122-124 White Crude Scale..	5¾- 5¼	5¼- 5¼	5¼- 5¼
124-126 White Crude Scale..	5¼- 5⅜	5¼- 5⅜	5¼- 5⅜
OKLAHOMA	(Per Pound, Group 3)		
124-126 White Crude Scale..	- 4¾	- 4¾	4¾- 4⅞
CALIFORNIA			
White Crude Scale.....	6 - 7	6 - 7	6 - 7

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	6⅜- 6⅝	6 - 6½	6¼- 6¾
30-34 Fuel Oil.....	5¾- 5⅞	- 5¾	5½- 5¾
28-30 Fuel Oil.....	5⅝- 5¾	5½- 5⅝	5½- 5⅝
OKLAHOMA			
38-40 Straw distillate.....	5½- 5¾	5⅝- 5⅝	5¾- 5½
36-38 Straw distillate.....	5¼- 5½	5⅝- 5⅝	5 - 5¼
32-36 Gas oil, cracked (Gal.)	4⅛- 4¼	4⅛- 4¼	4⅛- 4¼
32-36 Gas oil, uncracked (Gal.)	4¼- 4⅜	4¼- 4⅜	4¼- 4⅜
28-30 Fuel oil (Bbl.).....	1.60 -1.65	1.55 -1.60	1.40 -1.45
24-26 Fuel oil (Bbl.).....	1.42½-1.47½	1.40 -1.45	1.35 -1.40
22-26 Fuel oil (Bbl.).....	1.37½-1.42½	1.37½-1.40	1.32½-1.35
18-22 Fuel oil (Bbl.).....	1.35 -1.37½	1.32½-1.35	1.30 -1.32½
14-18 Fuel oil (Bbl.).....	1.30 -1.35	1.27½-1.30	1.25 -1.30
KANSAS*			
38-40 Light straw distillate..	5¾- 6	- 5¾	5½- 5¾
36-38 Light straw distillate..	5½- 5¾	5⅜- 5½	5¾- 5⅜
32-36 Gas Oil.....	4½- 4⅝	4½- 4⅝	- 4½
18-22 Fuel Oil.....	1.40 -1.45	1.40 -1.45	1.35 -1.40
24-26 Fuel Oil.....	1.55 -1.65	1.55 -1.65	1.40 -1.55
*F. O. B. refinery, Kansas destination.			
NORTH TEXAS			
38-40 Straw Distillate.....	5⅜- 5¾	5⅜- 5¼	5⅜- 5⅜
32-36 Gas Oil (Gal.) cracked	4¼- 4⅜	- 4½	- 4½
32-36 uncracked gas oil.....	4⅜- 4½	- 4½	- 4½
24-26 Fuel per (Bbl.).....	1.45 -1.50	1.45 -1.50	-1.50

GULF COASTAL	Prices Aug. 30	Prices Aug. 23	Prices Aug. 16
Fuel.....	1.60 -1.65	1.60 -1.65	1.60 -1.65
Gas Oil.....	5¼- 5¾	5¼- 5¾	5¼- 5¾
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)..	4¾- 5	4¼- 5	4¾- 5
16-20 Fuel Oil (Bbl.).....	1.35 -1.40	1.35 -1.40	1.32½-1.37½
ARKANSAS			
32-36 Gas Oil.....	4⅝- 4⅞	4⅝- 4⅞	4½- 4¾
Smackover Crude Fuel.....	1.25 -1.30	1.25 -1.30	1.22½-1.30
Road oil.....	1.30 -1.36½	1.30 -1.36½	1.30 -1.36½
CALIFORNIA*			
14-18 Fuel Oil (Bbl.).....	1.00	1.00	1.00
14-18 Bunker Oil (Bbl.)....	1.00	1.00	1.00
24-30 Gas Oil (Bbl.).....	1.15	1.15	1.15
27 + Diesel Oil (Bbl.).....	1.15	1.15	1.15
*(San Joaquin Valley, San Francisco 4c per bbl. more.)			
NEW ENGLAND	(F. O. B. Boston and Fall River)		
30-32 Gas Oil (Gal.).....	- 6¼	- 6¼	- 6
Fuel Oil (Bunker C) Bbl...	-1.78	-1.82½	-1.82

PETROLATUMS

PENNSYLVANIA			
Snow White.....	8½- 9	8½- 9	-11
Lily White.....	7½- 8	7½- 8	- 9½
Cream White.....	- 6½	- 6½	- 6¾
Light Amber.....	- 3½	- 3½	- 3¾
Amber.....	3¼- 3½	3¼- 3½	- 3¾
Red.....	- 3	- 3	3¼- 3¾
Green #5.....	1¾- 2	1¾- 2	1½- 1¾

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from page 97)

One reason for the change of opinion regarding the crude market lies in the belief of many that the supply of crude which will reach refiners from the Panhandle probably will dwindle as cold weather sets in. The Prairie Oil & Gas Co.'s pipe line will not be in use before February at the earliest and the problem of moving high cold test crude by tank car in winter appears insurmountable.

Optimism Growing

MID-CONTINENT refiners have reduced their stocks of gasoline to about as low a level as possible. The latest available report of operations of 60 per cent of the operating capacity of the field shows that on Aug. 20, stocks on hand represented only 9 days' supply. Stocks are lower than at the end of September a year ago near the close of the big season and now represent little more than a working stock.

With September normally a big month refiners are hoping that history will repeat itself and the market move upwards again. It will be remembered that last year U. S. Motor gasoline rose from a low point of 8 cents the last of August to 10 cents in September and after a short slump in October, climbed back to 10 cents and stayed at that figure throughout the winter. Crude markets were much lower than today at that time.

Refiners are unwilling to sell their gasoline at a flat price for September delivery in view of the present market prospects. The end of the month is at hand with little or no gasoline sold ahead.

Kerosene Markets

REFINERS throughout the Mid-Continent advanced their kerosene quotations promptly following the Standard of Indiana tank wagon advance early in the week. In Oklahoma 41-43 is bringing 9½ cents a gallon with other fields in line, freight rates considered. It is difficult to obtain any quantity for immediate shipment but some refiners are willing to book orders at current prices for future delivery.

Unlike the kerosene situation which developed earlier in the year, refiners have not begun, as yet, to increase their production rapidly. Shipments have stayed well in advance of production since exporters entered the field in July. If the market does not climb much above its present level many think that there will be no tendency towards overproduction, particularly since September and October normally are peak months in refinery shipments of burning oils. Others feel that possibly the big business of recent weeks has been advance buying by jobbers who have been trying to get a supply ahead for the fall trade before the usual September rush. If that is true there may be no big peak in September demand this year as formerly.

Refiners who have heavy distillate requirements in winter months for contract and regular customers are accumulating a reserve. Many refiners have not begun to cut furnace oils but may be expected to begin within the next few weeks as gasoline demand dwindles. Prices for 38-40 straw are 5½ cents a gallon and higher, with oil not being offered freely.

Industrial users of fuel oil are accumulating a supply for early winter use with the result that little is available in the field for early shipment. Prices of all grades have stepped up as demand has been increasing during the last few weeks. Refiners are booking orders for 14-18 fuel at $1.30 and upwards and for 26-30 fuel at around $1.60.

Demand for nearly all grades of lubricating oils is holding up remarkably well. Bright stocks are well sold up throughout the field in spite of the greater supply recently made available by the opening of two new plants. Neutral oils are selling well also.

CLEVELAND, O.—Ralph G. Luck, of the state geological survey of Tennessee, recently completed reconnaisance of about 10,000 acre area in Buffalo Valley, Putnam county, Tenn., writes Haskell B. Talley, of Murfreesboro, Tenn., adding that the North American Development Co. has moved equipment to a location one mile north of Murfreesboro, has erected steel derrick and will test a block of acreage.

Chicago Marketers Raise Kerosene Prices; Gasoline is Quiet

Staff Special

CHICAGO, Aug. 28

A STRONG kerosene market and a firm to strong but comparatively inactive market for heavier oils featured the Chicago resale market this week.

With the announcement of a 1-cent advance in tank wagon price of kerosene throughout its territory by Standard Oil Co. of Indiana Aug. 23, to take effect the following day, the refinery market for kerosene became more or less chaotic condition. Kerosene for immediate shipment was virtually unobtainable at 8¾ to 9 cents before the tank wagon advance was announced, although sellers could easily get ½ to ¾ cent more after the advance, kerosene was no more freely offered. A steady demand for, and continued scarcity of, kerosene for even reasonably prompt shipment are holding prices on the 41-43 water white grade firm at 9½ to 9¾ cents today.

Just before the advance the Standard contracted with a large refiner for his entire September output of kerosene which amounts to about 80 carloads. The business was placed at a price falling within the spot market range at that time, it was said.

Ten-cent quotations on 41-43 water white kerosene were frequently heard on Friday and Saturday of this week. The holders of odd cars of this oil on which they could guarantee immediate shipment believed they would have no trouble in getting their price, even in view of the fact that such a price was but 1 cent less than the top price asked for 58-60 U. S. Motor gasoline by most sellers.

Spot gasoline has been quiet. Jobbers have not deviated from their hand-to-mouth buying policy in the least. But regardless of the absence of buyers from the market, prices have held fairly well all week and today are on a parity with those of a week ago. A good demand was noted Friday and Saturday for gasoline in transit and several Chicago brokers venture that premiums will be obtained for transit stuff early next week with Labor Day close at hand. A slightly firmer tone is evident as the week closes.

The volume of gasoline offered in north Texas and the Shreveport district in competition with Oklahoma gasoline has dwindled considerably and today is not the bearish factor in the resale market that it has been for two weeks.

Quotations for 58-60 U. S. Motor gasoline this week varied as much as ⅝ cent, and demand has been quiet. It is reasonably safe to say, however, that prices of most of the gasoline sold this week have been 10¾ to 11 cents. One or two of the larger refiners have quoted 11¼ cents, making a few sales. A few sales have been made at 10⅝ cents; carload marketers say jobbers have reported getting 10½-cent quotations. One marketer on Friday sold approximately 35 cars of 58-60 U. S. Motor gasoline out of North Texas at 10 ½ cents, Group 3 price basis.

Burning oil prices moved up in sympathy with advancing kerosene prices. Although spot demand for distillate and gas oil is not appreciably larger, prices are firmly held. The 38-40 gravity straw color distillate is almost unobtainable under 5¾ cents with 5¾ cents asked by most brokers for this goods. Several refiners refuse to sell for less than 6 cents a gallon. Gas oil is in good demand at 4¼ to 4½ cents; this range covers prices both for cracked and straight reduced goods.

Demand for refinery fuel oils has been good, with prices advancing from 2½ to 5 cents a barrel. Sales of 18-22 gravity fuel oil have been numerous at $1.35 to $1.37½. The bottom price of 24-26 gravity goods to the trade is $1.45 with some sales reported at $1.47½, and $1.50 not an uncommon quotation.

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One large marketer of fuel oil reported he had several industrial customers whose equipment would permit their turning back to coal at any time, who were comparing present prices of coal and oil with a view to possibly turning back to coal should fuel oil prices continue upward.

Smackover crude fuel, with the exception of occasional transit cars going at $1.22½, is largely held at $1.25 to $1.30.

Week's Price Changes Tank Wagon Market

Gasoline Changes

Magnolia Petroleum—T.w. and s.s. prices at Dallas and Fort Worth were shown in error in Aug. 25 issue of National Petroleum News. Prices at Dallas had been reduced 2 cents on Aug. 21, and 2 cents at Fort Worth on Aug. 18, to 19 cents at both points, with 3 cent discount to dealers.

Kerosene Changes

Standard of Nebraska—T.w. and s.s. prices kerosene advanced 1 cent, through Nebraska, **Aug. 24.**

Magnolia Petroleum—T.w. and s.s. prices kerosene advanced 1 cent, through Oklahoma, to 14 cents generally, **Aug. 23.**

Continental Oil—T.w. and s.s. prices kerosene advanced 1 cent generally in New Mexico, with few exceptions, **Aug. 25.** Kerosene advanced 1 cent generally Colorado, Wyoming and Montana, and ½ cent in Idaho and Utah, **Aug. 26.**

Cities Service Buys Kansas Jobber

WICHITA, KAN., Aug. 30—The sale of the Ottawa Petroleum Co., Ottawa, Kan., was recently made to the Cities Service Oil Co., according to Myers Gross, president of the Refiners Consolidated Sales Co. of this city, which specializes in sales of this nature.

The Ottawa Company was a well known jobbing company with properties at Ottawa, Garnet, Wellsville and Baldwin, Kan. L. M. Belden, president of that company, has disposed of his interests, and is taking a vacation, after which he will announce his future plans. Otto Baxter, who was secretary, will continue with the Cities Service, in the capacity of manager.

Derby Oil & Refining Co.'s products had been handled at the Ottawa company's stations.

BRADFORD, PA.—The biggest drilling program by any one company now under way in the Bradford district is that of the Forest Oil Corp. On acreage in the Knapp Creek district, the company is running 10 strings of tools on a program of 124 wells which is by way of beginning systematic flooding on part of the property recently purchased from the J. T. Jones estate.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

These Prices in Effect Aug. 30, 1926

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	19	0	19	*	17
Newark, N. J.	19	0	19	21	17
Annapolis, Md.	19	2	21	*	17
Baltimore, Md.	19	2	21	24	17
Cumberland, Md.	19	2	21	24	17
Washington, D. C.	19	2	21	24	17
Danville, Va.	19	4½	23.5	*	17
Norfolk, Va.	19	4½	23.5	26.5	17
Richmond, Va.	19	4½	23.5	26.5	17
Roanoke, Va.	19	4½	23.5	26.5	17
Petersburg, Va.	19	4½	23.5	*	17
Williamsburg, Va.	19	4½	23.5	*	17
Charleston, W. Va.	18	3½	21.5	24.5	17
Clarksburg, W. Va.	19	3½	22.5	25.5	17
Keyser, W. Va.	19	3½	22.5	*	17
Parkersburg, W. Va.	18	3½	21.5	24.5	17
Wheeling, W. Va.	18	3½	21.5	24.5	17
Charlotte, N. C.	19.5	4	23.5	26.5	17
Hickory, N. C.	19.5	4	23.5	*	17
High Point, N. C.	19.5	4	23.5	*	17
Mt. Airy, N. C.	19.5	4	23.5	*	17
Salisbury, N. C.	19.5	4	23.5	*	17
Charleston, S. C.	19.5	5	24.5	27.5	17
Columbia, S. C.	19.5	5	24.5	27.5	17

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	21	0	21	25	18
Albany, N. Y.	17	0	17	19	18
Buffalo, N. Y.	20	0	20	23	18
Rochester, N. Y.	21	0	21	25	16
Syracuse, N. Y.	21	0	21	23	18
Boston, Mass.	21	0	21	23	18
Augusta, Me.	21	3	24	27	18
Manchester, N. H.	21	2	23	27	18
Burlington, Vt.	21	2	23	25	18

*In steel barrels.

ATLANTIC REFINING

Pittsburgh, Pa.	20	0	20	*25	17
Philadelphia, Pa.	20	0	20	*25	17
Allentown, Pa.	20	0	20	*25	17
Erie, Pa	18	0	18	*23	15
Scranton, Pa.	20	0	20	*25	17
Altoona, Pa.	20	0	20	*25	17
Dover, Del.	20	2	22	25	17
Wilmington Del.	20	2	22	25	17
Providence, R. I.	21	1	22	24	18
Boston, Mass.	21	0	21	23	18
Springfield, Mass.	21	0	21	23	18
Worcester, Mass.	21	0	21	23	18
Hartford, Conn.	21	2	23	26	17
New Haven, Conn.	21	2	23	26	18

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	20	3	23	28	18
Louisville, Ky.	19	3	24	27	17
Covington, Ky.	19	3	24	27	18
Clarksdale, Miss.	19	4	23	26	16.5
Jackson, Miss.	19	4	23	26	16.5
Natchez, Miss.	18.5	4	22.5	25.5	16
Vicksburg, Miss.	18.5	4	22.5	25.5	16
Birmingham, Ala.	20	2	22	25	18.5
Mobile, Ala.	19	2	21	24	17
Montgomery, Ala*	21	2	23	26	19.5
Atlanta, Ga.	†21	3½	25	28	19
Augusta, Ga.	†21	3½	25	28	19
Macon, Ga.	†21	3½	25	28	19
Savannah, Ga.	†19	3½	23	25	17
Jacksonville, Fla.	19	4	23	26	17
Miami, Fla.	21	4	25	28	18.5
Tampa, Fla.	19	4	23	26	17
Pensacola, Fla.	19	4	23	26	17.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia has ½ cent per gal. inspection fee on gasoline which is deducted as well as the state gasoline road tax of 3½ cents, to get the actual net tank wagon market to dealer.

S. O. INDIANA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Chicago, Ill.	†19	0	†19	21	15.5
Decatur, Ill.	19.2	0	19.2	21.2	16
E. St. Louis, Ill.	18.1	0	18.1	20.35	15.1
Joliet, Ill.	19.4	0	19.4	21.4	16.2
Peoria, Ill.	19.2	0	19.2	21.2	16
Quincy, Ill.	19.2	0	19.2	21.2	15.8
Indianapolis, Ind.	19.2	3	22.2	24.2	16.2
Evansville, Ind.	19	3	22	24	16
South Bend, Ind.	19.4	3	22.4	24.4	16.4
Detroit, Mich.	19.8	2	21.8	23.8	16.7
Grand Rapids, Mich.	19.7	2	21.7	23.7	16.6
Saginaw, Mich.	19.9	2	21.9	23.9	16.8
Madison, Wis.	19.3	2	21.3	23.3	16
Milwaukee, Wis.	19.1	2	21.1	23.1	15.8
La Crosse, Wis.	20.2	2	22.2	24.2	16.9
Minneapolis, Minn.	20.2	2	22.2	24.2	17.1
Duluth, Minn.	20.5	2	22.5	24.5	17.1
Mankato, Minn.	20.1	2	22.1	24.1	16.9
Des Moines, Iowa.	19.5	2	21.5	23.5	16.4
Davenport, Iowa.	19.5	2	21.5	23.5	16.4
Sioux City, Iowa.	19	2	21	23	16
Mason City, Ia.	19.5	2	21.5	23.5	16.4
St. Louis, Mo.	*18.6	2	20.6	22.9	15.5
Kansas City, Mo.	††19.9	2	21.9	23.9	14.8
St. Joseph, Mo.	*19	2	21	23	15.4
Fargo, N. D.	21.9	2	23.9	25.9	19.1
Grand Forks, N. D.	22.2	2	24.2	26.2	19.4
Minot, N. D.	21.9	2	23.9	25.9	19.1
Pierre, S. D.	20.5	3	23.5	25.5	17.6
Huron, S. D.	20.5	3	23.5	25.5	17.6
Wichita, Kans.	**17.8	2	19.8	21.8	15.3
Bartlesville, Okla.	17.8	3	20.8	22.8	15.3

†Dumps of 100 or more gallons at 18c per gallon.

*Includes city tax of ½c.

††Includes city tax of 1c.

**Dumps of 50 gallons or more in Kansas, 1c discount per gallon.

S. O. NEBRASKA

Crawford, Neb.	20	2	22	*	16.75
Omaha, Neb.	19.25	2	21.25	23.75	16
McCook	20.75	2	22.75	24.75	17.5
Norfolk	19.75	2	21.75	23.75	16.5
North Platte	20.75	2	22.75	24.75	17.25
Scottsbluff	20.25	2	22.25	24.25	16.75

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	20	2	22	22	18
Pueblo, Colo.	20	2	22	24	18
Casper, Wyo.	20	2½	22.5	24.5	16.5
Cheyenne, Wyo.	21	2½	23.5	25.5	18
Butte, Mont.	22	2	24	24	20.5
Helena, Mont.	24	2	26	28	20.5
Salt Lake City, Utah.	22.5	3½	26	28	19
Boise, Ida.	24	3	27	29	21
Albuquerque, N. M.	25.5	3	28.5	28.5	20

S. O. CALIFORNIA

Phoenix, Ariz.	22	3	25	28	21.5
Los Angeles, Cal.	14.5	2	16.5	20.5	15.5
Fresno, Cal.	16.5	2	18.5	22.5	17.5
San Francisco, Cal.	16	2	18	22	15.5
Reno Nev.	19.5	4	23.5	27.5	19
Portland, Ore.	16	3	19	23	16.5
Seattle, Wash.	16	2	18	22	16.5
Spokane, Wash.	20	2	22	26	20.5
Tacoma, Wash.	16	2	18	22	16.5

S. O. LOUISIANA

Little Rock, Ark.	18	4	22	25	16
Alexandria, La.	18	2	20	23	17
Baton Rouge, La.	17	2	19	22	15.5
Lake Charles, La.	18.5	2	20.5	23.5	17
New Orleans, La.	*18.5	2	20.5	23.5	16
Shreveport, La.	17	2	19	22	16
Lafayette, La.	18	2	20	23	16.5
Bristol, Tenn.	21	3	24	27	17.5
Chattanooga, Tenn.	20.5	3	23.5	26.5	17.5
Knoxville, Tenn.	20.5	3	23.5	26.5	18
Nashville, Tenn.	18	3	21	24	18
Memphis, Tenn.	17	3	20	23	17

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
All Ohio points	20	2	22	24	18

MAGNOLIA PETROLEUM

Muskogee, Okla.	17	3	20	23	14
Oklahoma City	15	3	18	21	14
Tulsa, Okla.	17	3	20	23	14
Fort Smith, Ark.	18	4	22	25	15.5
Little Rock, Ark.	18	4	22	25	15.5
Texarkana, Ark.	20	4	*24	*24	15
Dallas, Tex.	18	1	**19	19	14
El Paso, Tex.	21	1	**22	22	15
Fort Worth, Tex.	18	1	**19	19	14
Houston, Tex.	20	1	**21	21	14
San Antonio, Tex.	18	1	**19	19	14

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

**Magnolia is maintaining only one price schedule in Texas—its retail schedule. This is in keeping with its contract, effective May 5, which allows the dealer 3c off the retail price.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changed)

	Oleum Spirits	V.M.&P. Naphtha	Cleaners Naphtha
Chicago	21	23	21
Detroit	22.2	24.7	22.7
Kansas City	21.2	23.2	21.2
Milwaukee	21.2	*25.7	*23.7
Minneapolis	*24.5	*27	*25
St. Louis	20.4	22.9	22.2
New York	...	22	....

*Includes 2c state tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
ONTARIO					
Toronto	26.5	3	29.5	33	24
Ottawa	26.5	3	29.5	33	24
Cochrane	31.5	3	34.5	40	29
Ft. William	28.5	3	31.5	36	26.5
MANITOBA					
Winnipeg	29.5	3	32.5	36	26.5
SASKATCHEWAN					
Regina	32.5	0	32.5	37	29.5
ALBERTA					
Edmonton	31.5	2	33.5	37	28.5
Calgary	29.5	2	31.5	35	26.5
BRITISH COLUMBIA					
Vancouver	23	3	26	30	23
QUEBEC					
Montreal	26.5	3	29.5	33	24
Quebec City	28.5	3	31.5	35	26
Three Rivers	28.5	3	31.5	35	26
NEW BRUNSWICK					
St. John	29.5	3	32.5	36	27
Moncton	29.5	3	32.5	36	27.5
NOVA SCOTIA					
Halifax	29.5	3	32.5	36	27
Sydney	31.5	3	34.5	37	27.5
PRINCE EDWARD ISLAND					
Charlottetown	29.5	3	32.5	36	27

Note: In districts surrounding these points 1c additional is added to city price.

Higher Kerosene Prices Maintained By Exporters; Gasoline Quiet

By Special Correspondent
NEW YORK, Aug. 30

THE higher prices reached the previous week in kerosene were put to a test last week and the market was found strong. Kerosene is scarce. One prominent refiner advanced prices ½ cent on Friday. Gasoline is steady in both the New York and Gulf markets. Export demand is quiet, although one substantial inquiry appeared at the Gulf for France. Lubricants are generally inactive with the exception of neutral oil and bright stock. Cylinder stocks are plentiful but not wanted at present. Paraffin waxes were quiet.

Export Gasoline—New York

An encouraging feature regarding business with France was the apparent stabilization of the franc at slightly under 3 cents. But the import duty into France has been increased to 60 per cent. It was 30 per cent. The increase may cause French consumers to economize somewhat on their gasoline and kerosene. U. S. Motor gasoline was almost generally quoted at 12½ cents a gallon at New York harbor refineries, although 12¾ cents has not passed out entirely. A lot of 1000 drums of U. S. Motor gasoline was sold to the Near East.

Export Gasoline—Gulf Ports

An inquiry came Thursday for a cargo of about 40,000 barrels of gasoline and kerosene for September shipment to France. Although there is a general disposition among buyers to look for lower prices because of the advanced season, refiners were making virtually no price concessions. On U. S. Motor in bulk sellers were maintaining a range of 11⅞ to 12⅛ cents; 60-62 400 end point was 12½ to 12⅝ cents; 61-63 390 end point 12⅞ to 13⅛ cents, and 64-66 375 end point 13½ to 13⅝ cents. Cased gasoline was quiet at $2.20 a case for U. S. Motor, and $2.40 for 64-66 375 end point.

Domestic Gasoline—New York

The movement of gasoline from refiners to jobbers has been better because jobbers are stocking up for Labor Day demand. Because rain has fallen nearly every day in August has probably curtailed the use of motor fuel for pleasure riding. However, it is expected that nature will compensate by giving better weather in September and that consumption then will be heavy. Steady to firm markets are expected over the next few weeks. It is pointed out that in September 1924 and 1925, the market grew stronger. U. S. Motor is held strongly at 12½ cents a gallon in New York harbor refineries and in tank cars delivered to the trade at 13½ cents a gallon.

Domestic Gasoline—Gulf Ports

The situation in the Gulf district is unchanged. Though it is approaching the season when easing of the market might be expected, conditions show no symptoms of weakness. The rapid strengthening of the kerosene market may help gasoline. Refiners may be inclined to make shallower cuts to turn out larger percentages of kerosene, thereby curtailing the supply of gasoline. At Gulf refineries U. S. Motor has been offered at 12¼ cents a gallon. Jobbers are conservative in purchasing just now.

Export Kerosene—New York

Kerosene for the export trade has been quiet. It is reported a few fair-sized inquiries are going the rounds, though nothing large has come to light. The French Government advanced its import tax to 60 per cent as against 30 per cent formerly. Now that the franc is more stable more business with that country may be looked for. Water white is firm at 10½ cents a gallon and prime white is firm at 10 cents a gallon, f. o. b. refineries.

Export Kerosene—Gulf Ports

Kerosene is strong and somewhat scarce at the Gulf. The chief export inquiry reported was 40,000 barrels of kerosene and gasoline for shipment to France in September. Water white kerosene is held strongly at 10¼ to 10½ cents a gallon, and prime white is at a minimum of 9 cents a gallon. Cased water white is unchanged at $2.10 and cased prime unchanged at $1.95 a case, in cargo lots.

Domestic Kerosene

The kerosene market continues the strongest of the petroleum derivatives. The majority opinion is that prices will be higher, some observers predicting that kerosene will be dearer than gasoline. Other observers argue the situation will right itself when refiners make larger kerosene cuts. Aug. 27 the Sinclair Refining Co. advanced bulk kerosene 2 cents a gallon to 11 cents at New York, Philadelphia and Atlantic Coast terminals. Water white of 44 gravity is held firmly at 11½ cents a gallon in tank cars delivered in the Greater New York district.

Bunker Oil—New York

Grade C bunker oil was steady and firm all week at $1.75 a barrel at refineries and $1.81½ a barrel f. a. s. New York harbor. There is a good demand for this product and no changes in prices are looked for. Diesel oil is active and New York refiners were firm at $2.50 a barrel.

Bunker Oil—Gulf Ports

Grade C bunker oil, taxes paid, in cargoes, f. o. b. steamers, Tampico, is 5 cents a barrel cheaper at $1.35. The same grade, f. o. b. New Orleans, is unchanged at $1.60. Fuel oil is firm at $1.50 a barrel. Fort Worth and Denver railroad inquiry for September requirments is expected to hold fuel oil strong.

Gas Oil—New York

Gas oil is becoming stronger. The 36-40 is firm at 6¾ cents a gallon and 28-34 is generally quoted ¼ cent higher at 6¼ cents.

Gas Oil—Gulf Ports

Domestic demand for gas oil is quiet at the Gulf and there is virtually no export business.

Lubricants—New York

Steam refined stocks are lifeless, one prominent interest going so far as to characterize them as a drug on the market. Foreign markets are chaotic. Pennsylvania 600 steam refined, in barrels, New York, can now be bought at 20 cents a gallon, a recession of ½ cent a gallon, while other grades are off ½ cent to 1 cent a gallon. Neutral oils are maintained at unchanged prices. Bright stocks also are holding up.

Lubricants—Gulf Ports

Demand for lubricants in general is quiet for the season. Leading interests report absence of export inquiries. Prices are essentially unchanged throughout the list, ranging from 7¼ cents a gallon for 100 vis. No. 2 unfiltered pale to 16 cents for 800 vis. No. 6 red oil.

Waxes—New York

The slightly increased demand from England for white crude scale wax has given the market a better tone, although prices are unchanged. Fully refined waxes are still inactive with no price changes. However, it is reported that resale hands are cutting refiners' prices by ¼ cent a pound, though this is regarded as but a temporary condition. In fact some shrewd observers are expecting price advances within the next two weeks. White crude scale 122-124 A. m. p. is offered plentifully at 5⅛ cents a pound, while fully-refined 120-122 A. m. p. was offered at 5¾ cents with purchasers reticent.

Waxes—Gulf Ports

Buying by British importers has increased demand for semi-refined and

scale waxes, but no advance in price has been made. Refined waxes are unchanged in price and quiet. White crude scale 124-126 A. m. p. was sold at 5.05 cents a pound, and 124-126 A. m. p. semi-refined at 5.15 cents.

Petrolatums

Export demand is small. Demand for home consumption has been a little better and prices are steady. The medicinal oils are in moderate demand at unchanged prices.

S. O. California Puts Out Low Priced Gasoline

LOS ANGELES, Aug. 20.—What promises to be the biggest fight against the gasoline bootlegger in the Los Angeles area was being staged this week by the Standard Oil Co. For the first time in the marketing history of the Standard, this company, is now engaging in the production of a second grade motor fuel, or, as the refiners in this locality like to term it, a "bootleg brand." It is understood that the name of the new product is Flight gasoline, and it is being sold to resellers at 6 cents less than the Standard's service station quotations for Red Crown. Flight is 2 cents less than Red Crown at the pump.

Ever since a large group of small refiners sprung up in Los Angeles and surrounding area during 1922, 1923 and 1924, the Standard has lost a considerable gallonage to price-cutting refiners and bootleggers. The Standard maintained its published service station prices, and while some refiners accused the Standard of secret rebates at different times, there has, so far as is known, been no authentic case of such rebates ever having been made. Some of its competitors sold, at times, at as low as 3 cents under its retail prices.

It is said the Standard intends to double its gasoline business in the Los Angeles district. It is selling Flight gasoline to Independent dealers only and not at its own service stations. Signs have appeared at some Independent service stations reading, "Standard Oil Product 18½c a gallon." Red Crown is selling at 20½ cents.

On Aug. 13, the Wilshire Oil Co. manufacturing Economy gasoline, which is its low priced brand, met the Standard's price. The Wilshire has a large gallonage locally and is generally considered to be the principal independent in the so-called bootleg trade. Announcements from the Wilshire company state that it intends to fight the Standard to a finish, and, if necessary, it may carry its Economy brand gasoline into the San Francisco territory of the Standard, where as yet, it has never marketed.

MOUNT CARMEL, ILL. — George S. Clarke, oil producer operating in Illinois fields, died recently at Asheville, N. C. He was 59 years old. Funeral services and burial were in Mount Carmel.

Complete Export Markets

New York Export Market

GASOLINE	Aug. 30	Aug. 23
U. S. Motor Tank cars Ref.	12½	12½–12¾
U. S. Motor cases	28.90	–28.90
California grade U. S. Motor F. O. B. N. Y. Bulk	12½	12½–12¾
KEROSENE		
43-45-150 W.W.Tank cars Ref.	10½	–10
43-45-150 W.W.Cases	21.15	–20.90
42-44-110 S.W.Cases	19.65	–19.65
GAS OIL		
36-40, Bulk Refinery	–06¾	–06¾
28-34, Bulk Refinery	–06	–06
MEXICAN BUNKER OIL		
Grade C, f. o. b. ref. Bulk	1.75	– 1.75
Diesel Oil f. o. b. ref. Bulk	2.50	– 2.50

LUBRICATING OILS

The following prices are cooperage basi f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS (Bbls.)

1 inch Immersion Test; All Penna. Products

Filtered D 600	.29	–29
Filtered E 600	.28	–28
Unfiltered 600 s. r.	.20	–20½
Unfiltered 650 s. r.	.27	–27½
600 flash s. r.	.27½	–28½
630 Flash	.38	.38½

RED PARAFFIN (Bbls.)

(Viscosity at 70)

300 vis.	No. 5 color	21	–21
250 vis.	No. 5 color	20	–20
High Viscosity	No. 5 color	25	–25

NEUTRAL OILS (Bbls.)

(Viscosity at 70)

200 vis.at F.Pale	No. 3 color	–31	–31
180 Pale	No. 3 color	–29	–29
150 Pale	No. 3 color	–24½	–24½

BLACK OIL (Bbls.)

25-30 cold test	13½	–13½
15 cold test	14½	–14½

MEDICINAL OILS

(Includes Price of Drums)
(Penna. Stocks)

	Aug. 30	Aug. 23
Domestic 875-885 s. g.	– .85	– .85
Domestic 865-.870 s. g.	.75– .80	.75– .80
Russian 885-.890 s. g. 325-330 vis	1.10–1.25	1.10–1.25

WAXES

(Penna. Stocks)
(F. A. S. Carload Lots)

WHITE CRUDE SCALE		
122-124 A. m. p.	–05¾	–5.15
124-126 A. m. p.	–5.20	–5.20
MATCH		
105-108 A. m. p.	–06	–06
FULLY REFINED		
120-122 A. m. p.	–05¾	–05¾
123-125 A. m. p. Philadelphia	–05¾	–05¾
125-127 A. m. p.	–5.80	–5.80
128-130 A. m. p.	–06	–06
130-132 A. m. p.	–06¼	–06¼
133-135 A. m. p.	–06½	–06½
135-137 A. m. p.	–06¾	–06¾
SEMI REFINED		
122-124 A. m. p.	.....	.....
YELLOW CRUDE SCALE		
124-126 A. m. p.	–03	–05

PETROLATUMS

(Penna. Stocks)
Per Pound

Dark Green	02¾–03	02¾–03
Veterinary	03¼	03¼
Light Amber	03¼	03¼
Dark Amber	03½	03½
Cream	06¼	06¼
Lily White	08¼	08¼
Snow White	10¾–11	10¾–11

Gulf Export Market

GASOLINE

F. O. B. Seaboard
(Shipments of 20,000 Bbls. and over)

	Aug. 30	Aug. 23
U. S. Motor, Bulk	11¾–12¼	12 –.12¼
60-62 400 e. p. Bulk	12½–12¾	–.12½
61-63-390 e. p. Bulk	13	–.12¾
64-66 375 e. p. Bulk	13½	–.13½
U. S. Motor, Cases (cargo lots	2.20	2.20
64-66, Cases (cargo lots)	2.35	2.40
KEROSENE		
Water White, 43-45 bulk	10¼–10½	–10
Prime White, 41-43 bulk	.09	–08¾
Water White, cases (cargo lots)	2.10	–2.05
Prime White, cases (cargo lots)	1.95	–1.90
DOMESTIC GAS AND BUNKER OIL		
26-28, gravity, bulk*	05¾	–05¾
32 plus, bulk, Dark	05½	–05½
Grade C. Bunker oil	1.55	–1.60
Cargoes	1.40	–1.40

*Transparent through neck of a 4 oz. bottle.

MEXICAN CRUDE AND BUNKER OILS

F. O. B. Steamer Tampico

Heavy, Taxes to be added	1.10	–1.12
Grade C, Bunker oil Taxes paid...cargoes	1.35	–1.40
Grade C, Bunker oil F. O. B. New Orleans	1.60	–1.60

SOUTH TEXAS

(Viscosity at 100° F; cold test 0)
(Tanker, F. O. B. Houston)

*LUBRICATING OILS	Aug. 30	Aug. 23
100 Vis. No.2 Unfiltered Pale	07¼	07¼
150 Vis. No.2½ Unfiltered Pale.	09¼	09¼
200 Vis. No.3 Unfiltered Pale	10¾	10¾
300 Vis. No.3 Unfiltered Pale	13	13
500 Vis. No.3½ Unfiltered Pale,	14¼	14¼
200 Vis. No.5½ Red Oil	10¼	10¼
300 Vis. No.5½ Red Oil	10¼	10¼
500 Vis. No.6 Red Oil	11	11
800 Vis. No.6 Red Oil	16	16

*These prices are entirely nominal owing to wide fluctuations.

Pacific Export Market

(Cargo lots quotations at seaboard, Los Angeles)

	Aug. 30	Aug. 23
Gasoline, U. S. Motor— 54°-56°	10 –10½	10 –10½
Gasoline, U. S. Motor— blends and special cuts	10½–11	10½–11
Gas Oil, 24°—30°B. per bbl	$1.15	$1.15
Diesel Oil, 27°B—plus per bbl	$1.15	$1.15
Bunker Oil, 14°—18°B. per bbl	$1.00	$1.00
Fuel Oil, 14°—18°B. per bbl	$1.00	$1.00
Kerosene, W. W. 38°—40° B per gal., 125-150 flash test	.05¾–06¾	.05¾–.06¾
Cased Goods		
Gasoline, U. S. Motor	$2.25	$2.55
Kerosene, W. W. 38°—40° B per case, flash test 125-150	$1.50–1.55	$1.50–1.55

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made from Domestic (including California) and Mexican Crudes.

	Aug. 30	Aug. 23
U. S. Motor Gasoline, Tank Cars Delivered greater N.Y.	13½	13½–13¾
U. S. Motor Gasoline, Tank Cars Bayonne	12½	12½–12¾
U. S. Motor, Tank Cars, *Atlantic Seaboard Terminals	12½	12½–12¾
Kerosene, 44 150 W. W. Tank Cars de'd greater N.Y.	–11½	–11
Grade C Bunker f.o.b.N.Y.Ref.	1.75	1.75
Diesel Oil f.o.b. Refinery	2.50	2.50
Gas Oil, 36-40, Bulk Refinery	–06¾	–06¾
Gas Oil, 28-34 Bulk, Refinery	.06¼	–06

*New York, Philadelphia, Portsmouth, Va. Charleston, S. C.

Crude Oil Prices All Fields

PRICES IN EFFECT, *Aug. 30*

EASTERN FIELDS
Posted by Joseph Seep Purchasing Agency

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$3.40
Bradford District Oil in National Transit Lines (Bradford District)	3.40
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.30
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.30
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.25
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	3.05
Keister Grade in National Transit Lines (Butler Co.)	2.30
Gaines, Tioga Co. (Pa.)	2.85
Cabell Grade in Eureka Pipe Lines (West Virginia)	2.40
Corning Grade in Buckeye Pipe Lines (Ohio)	2.55
*Somerset Medium in Cumberland Pipe Lines (Kentucky)	2.50
*Somerset Light in Cumberland Pipe Lines (Kentucky)	2.65
Ragland Grade in Cumberland Pipe Lines (Kentucky)	1.25

*Somerset oil run prior to Oct. 1, 1923, takes price of 6 cents lower than above quotations.

Posted by Stoll Oil Refining Co.

Tinsley Bottom, Tenn. oil in Stoll Oil Refining Co. lines	$2.46
Oil City, Ky. oil in Stoll Oil Refining Co. lines	2.65

CENTRAL STATES FIELDS
Posted by Ohio Oil Co.

Wooster	$2.55	Illinois	$2.37
Lima	2.48	Plymouth	1.90
Waterloo	1.35	*Canadian Petrolia	2.88
Indiana	2.25	*Posted by Imperial Oil. Ltd.	
Princeton	2.37		

OKLAHOMA, KANSAS And NORTH TEXAS
Prices of Prairie Oil & Gas Co.
(In Oklahoma, Kansas, North and East Centra Texas) Effective May 15, 1926.

28-28 9	$1.65	41-41.9	$2.69
29-29.9	1.73	42-42 9	2 77
30-30.9	1.81	43-43.9	2.85
31-31.9	1.89	44-44.9	2.93
32-32.9	1.97	45-45.9	3.01
33-33.9	2.05	46-46.9	3 09
34-34.9	2.13	47-47.9	3.17
35-35.9	2.21	48-48.9	3.25
36-36.9	2.29	49-49.9	3.33
37-37.9	2.37	50-50.9	3.41
38-38.9	2.45	51-51.9	3.49
39-39.9	2.53	52 and above	3.57
40-40.9	2.61		

The Texas Co. posted same gravity and price as Prairie.

Humble Oil & Refining Co. Prices
(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Humble's grades and prices same as Prairie schedule. In fields where Humble purchases crude below 28°, 8 cents less for each full degree.

Mirando, Tex	$1.00

Magnolia Petroleum Co. Prices
In Oklahoma, Kansas and North and East Central Texas

Same grades and prices as posted by Prairie, excepting that Magnolia is paying $1.30 for all oil below 28 gravity.

Corsicana heavy	$1.25

PANHANDLE, TEXAS
Prices of Kay County Gas Co. and Magnolia Petroleum Co.

28-28.9	$1.35	34-34.9	$1.65
29-29.9	1.40	35-35.9	1.70
30-30.9	1.45	36-36.9	1.75
31-31.9	1.50	37-37.9	1.80
32-32.9	1.55	38-38.9	1.85
33-33.9	1.60	39 and above	1.90

Humble Oil & Refining Co.

Same grades and prices as Kay County Gas Co. and Magnolia Petroleum Co., excepting these five grades of light oil posted on June 21:

39-39.9	$1.90	42-42.9	$2.05
40-40.9	1.95	43-43.9	2.10
41-41.9	2.00	44 and above	2.15

NORTH LOUISIANA—ARKANSAS FIELDS
***Prices of the Standard Oil Co. of Louisiana**

Caddo, below 26	$1.40
" 26-28.9	1.55
" 29-31.9	1.70
" 32-34.9	2.25
" 35-37.9	2.35
" 38 and above	2.45
Homer, below 31	1.85
" 31-32.9	2.00
" 33-34.9	2.10
" 35 and above	2.20
Haynesville, below 33	2.00
" 33 and above	2.10
El Dorado, including Lisbon, below 33	2.00
" 33-34.9	2.10
" 35-36.9	2 20
" 37 and above	2.30
Bull Bayou, 32-34.9	1.95
" 35-37.9	2.10
" 38 and above	2.25
Smackover, below 24	1.10
" 24-24.9	1.35
" 25-25.9	1.40
" 26-26.9	1.45
" 27 and above	1.50
De Soto	2.30
Crichton	2.10
Bellevue	1.50
Cotton Valley	1.20
**Urania, La	1.10

*Gulf, Louisiana Oil Refining and The Texas Co. same prices as Standard.

**Posted by Louisiana Oil Refining Corp.

Gulf is paying 95c for Calion (East El Dorado Crude.)

STEPHENS, ARKANSAS
Posted by Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

26 and above	$1.65	Below 26	$1.45

GULF COASTAL FIELDS
Posted by Humble Oil & Refining Co.

Grades A	$1.40	29-29.9	$1.65
Grades B:		30-30.9	1.70
Below 25	1.40	31-31.9	1.75
25-25.9	1.45	32-32.9	1.80
26-26.9	1.50	33-33.9	1.85
27-27 9	1.55	34-34.9	1.90
28-28.9	1.60	35 and above	1.95

Fields classified as A and B are Goose Creek, Hull, Liberty, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

Prices of The Texas Co.

Grades A	$1.60	*Grades B	$1.60
‡Grades B (light crude):			
35-35.9	$2.05	38-38.9	$2.20
36-36.9	2.10	39-39.9	2 25
37-37.9	2.15	40 and above	2.30

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

SPINDLETOP
Humble Oil & Refining Co.

Grade A	$1.25	27-27.9	$1.40
Grades B:		28-28.9	1.45
Below 25	1.25	29-29.9	1.50
25-25.9	1.30	30-30.9	1.55
26-26.9	1.35	31-31.9	1.6

ROCKY MOUNTAIN FIELDS
Prices of Ohio Oil Co. and Midwest Refining Co.

‡Salt Creek 29-29.9	$1 73
" " 30-30.9	1.81
" " 31-31.9	1 89
" " 32-32.9	1.97
" " 33-33.9	2 05
" " 34-34.9	2 13
" " 35-35.9	2.21
" " 36 36.9	2 29
" " 37 and above	2.37
Elk Basin	2 40
Grass Creek light	2 40
Big Muddy	2.25
Lance Creek	2 40
Rock Creek	2.25
‡Osage	2 40
‡Cat Creek, Mont	2 40
Sunburst, Mont	1.05
‡Hogback, N. Mex	2.45
Artesia, N. Mex	2 20

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light, and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA
Standard Oil Co. of California

Santa Maria and Ventura Posted by *Union Oil Co.

Gravity	Signal Hill Huntington Beach	Ingle-wood Torrance	Newhall, McKittrick, Whittier La Habra	Olinda-Kern River	Brea Canon, Richfield	Athens-Rosecrans Dominguez	Monte-bello	Coyote Hills	Santa Fe Springs	Midway-Sunset Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	.....	$ .85	$ .85	.....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.87	.87	.85	.75	.87	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
16-16.9	.90	.90	.85	.75	.90	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
17-17.9	.94	.94	.85	.75	.94	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
18-18.9	.98	.98	.86	.75	.98	.....	.86	.86	.....	.75	.75	.75	.75	.85	.85
19-19.9	1.04	1.04	.87	.75	1.04	.....	.87	.87	.....	.75	.75	.75	.75	.85	.85
20-20.9	1.10	1.10	.89	.....	1.10	.....	.89	.90	.....	.82	.82	.79	.78	.90	.90
21-21.9	1.16	1.16	.91	.....	1.16	.....	.91	.98	.....	.90	.90	.86	.81	.97	.97
22-22.9	1.22	1.22	.94	.....	1.22	.....	.94	1.06	.....	1.00	1.00	.93	.85	1.04	1.04
23-23.9	1.28	1.28	.....	.....	1.28	.....	.97	1.14	.....	1.11	1.11	1.00	.89	1.11	1.11
24-24.9	1.34	1.34	.....	.....	1.34	$1.34	1.01	1.22	$1.02	1.22	1.22	1.07	.93	1.18	1.18
25-25.9	1.40	1.40	.....	.....	1.40	1.40	1.05	1.30	1.18	1.33	1.33	1.14	.97	1.25	1.25
26-26.9	1.46	1.46	.....	.....	1.46	1.46	1.09	1.38	1 16	1.44	1.44	1.21	1.01	1.32	1.32
27-27.9	1.52	1.52	.....	.....	1.52	1.52	1.13	1.46	1.24	1.55	1.55	1.28	1.05	1.39	1.39
28-28.9	1.58	1.58	.....	.....	1.58	1.58	1.17	1.54	1.32	1.66	1.66	1.35	.....	1.46	1.46
29-29.9	1.64	.....	.....	.....	1.64	1.64	1.21	1.62	1.40	1.77	1.77	1.42	.....	1.53	1.53
30-30.9	1.70	.....	.....	.....	1.70	1.70	1.25	1.70	1.48	1.88	1.88	1.49	.....	1.60	1 60
31-31.9	1.76	.....	.....	.....	.....	1.76	.....	.....	1.60	1.99	1.99	1.56	.....	.....	1.67
32-32.9	1.84	.....	.....	.....	.....	1.84	.....	.....	1.72	2.10	2.10	1.63	.....	.....	1.73
33-33.9	.....	.....	.....	.....	.....	1.92	.....	.....	1.84	2.21	2.21	1.70	.....	.....	1.79
34-34.9	.....	.....	.....	.....	.....	2.00	.....	.....	1.96	.....	2.32	1.77	.....	.....	1.85
35-35.9	.....	.....	.....	.....	.....	2.08	.....	.....	2.08	.....	.....	1.84	.....	.....	1.92
36-36.9	.....	.....	.....	.....	.....	2.16	.....	.....	2.16	.....	.....	.....	.....	.....	.....
37-37.9	.....	.....	.....	.....	.....	2.24	.....	.....	2.24	.....	.....	.....	.....	.....	.....
38-38.9	.....	.....	.....	.....	.....	2.34	.....	.....	2.34	.....	.....	.....	.....	.....	.....
39-39.9	.....	.....	.....	.....	.....	2.44	.....	.....	2.44	.....	.....	.....	.....	.....	.....
40-40.9	.....	.....	.....	.....	.....	2.54	.....	.....	.....	.....	.....	.....	.....	.....	.....
41-41.9	.....	.....	.....	.....	.....	2.64	.....	.....	.....	.....	.....	.....	.....	.....	.....
42-42.9	.....	.....	.....	.....	.....	2.74	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Union Oil Co. also purchases Long Beach crude and is maintaining the same gravity and price schedule in t hat field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Do minguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	Aug. 30	Aug. 23
Soda Ash light 58% bags.cwt.	$1.38	$1.38
Silicate of Soda 60 deg. drums.....cwt.	-$1.65	-$1.65
Sal Soda wks.....	.90- 1.10	.90- 1.10
Caustic Soda 70% solid..cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works.....	- 2.00	- 2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	10.50-11.00	10.50-11.00
Liquid Chlorine tank cars works.....lb.	- .04	- .04

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot.....lb.	11.8	12.2
Sept.-Dec.	11.8	12.2
Tanks, spot.....	11	10.8
Boiled carloads spot.....lb.	11.4	10.9
*Soya Bean spot, Bbls....lb.	14¾	14
Castor Oil—		
No. 1 Carlots, Bbls.....	-.12½	-.12½
No. 3 Carlots, Bbls.....	-.12	-.12
Animal Oils—		
English Degras.....lb.	.05½	-.05½
Domestic Degras, bbls., carloads.....lb.	-.04¾	-.04¾
*Horse.....lb.	-.08½	-.09
Oleic Acid—		
Dist. Bbls.....lb.	.09¾-.10¼	.09¾-.10¼
Saponified Bbls.....lb.	.11 -.11½	.11 -.11½
Lard Oils—		
Prime		
Winter Strained. to 1½ffa.40/45c.t.lb.	.17	.18
Extra Winter Strained. 2 to 4½ffa.40/45c.t.lb.	.12¾	.13¼
Extra..... 4 to 5 ffa.40/45c.t.lb.	.12½	.13
Extra No.1 7 to 10 ffa.40/50c.t.lb.	.11¾	.12
No. 1.....15 to 18 ffa.40/45c.t.lb.	.11½	.11½
No. 2.....22 to 23 ffa.40/45c.t.lb.	.11¼	.11¼
Prime Edible Tallow under 1½ffa. 40/45c.t.N.Y.....lb.	-.09¾	-.09¾
Tallow acidless.....lb.	-.11¼	-.11¼
Lard Stearine.....lb.	nominal	nominal
Oleo Stearine.....lb.	-.11¼	-.11½
Neatsfoot Oil—		
Pure.....bbls.-lb.	.15¾	.15¾
Extra.....do...lb.	.11¾	.12
No. 1.....bbls.-lb.	.11¼	.11½
Cold pressed.....lb.	.18¼	.18¾
Fish Oils—		
Menhaden Oil		
Light pressed.....gal.	-.65	-.65
White.....gal.	-.70	-.67
Yellow bleached.....gal.	-.68	-.70
*Herring tank cars coast.....gal.	-.47	-.50
Whale, extra winter bleached.....gal.	.82	-.82
Seal.....gal.		nominal
Naval Stores—		
Turpentine, N. Y.....gal.	.95	.96½
Turpentine†.....gal.	.89	.90½
Rosin, B. N. Y.....bbl.	14.25	14.65
Rosin, F. N. Y.....bbl.	15.30	15.70
Rosin, B†.....bbl.	12.60	13.00
Rosin, F†.....bbl.	13.80	14.05
Rosin Oil 1st run.....gal.	.78	.78
Rosin Oil 2nd run.....gal.	.82	.82
Pine Tar—		
Kiln Burnt.....bbl.	14.50	14.50
Retort.....bbl.	18.50	18.50
Alcohol—Denatured Formula 5		
Bbls.....gal.	-39	-36
Drums.....gal.	-32	-29

†Savannah, Ga. market.
*Nominal.

Canada Imports 97% Of Its Crude Supply

OTTAWA, CAN., Aug. 30.—The 13 refineries and eight compounders in Canada during 1925 turned out products valued at $50,762,127, as compared with a value of $49,411,067 in 1924 and $46,280,534 in 1923. Of the 445,118,601 Imperial gallons of crude oil used by these plants, 432,781,409 gallons, or 97.2 per cent, were imported, principally from the United States and Peru.

However, the use of domestic crude is expected to increase due to the developments at Royalite No. 4 and the McLeod well in Turner Valley, Alta., together with the linking up of the Hudson Bay Co. and Marland Oil interests for the development of that province.

Gasoline production in 1925 amounted to 165,790,072 imperial gallons, which is an increase of 5,544,333 gallons, or 3.4 per cent, over 1924 output. Kerosene production decreased 16,262,207 gallons under 1924, amounting to 45,046,459 imperial gallons in 1925. Output of lubricating oils was about the same in 1925 and 1924, totaling 15,789,852 and 15,479,465 imperial gallons respectively, as was the output of fuel and gas oil which amounted to 135,954,156 imperial gallons in 1925, as compared with 134,941,640 gallons in 1924. Production of wax and candles increased 6,624,629 pounds in 1925, to 15,775,654 pounds.

Of the 13 refineries in operation, three were in Ontario, three in Alberta, two in Quebec, 2 in British Columbia and one each in Nova Scotia, Manitoba and Saskatchewan. Of the eight compounding plants making lube oils and greases, four were in Ontario, two in Quebec and one each in New Brunswick and Alberta.

The capital invested in Canada's refining industry amounts to $50,580,549 and furnishes employment to 3738 persons.

The value of production from the 13 refineries in 1925 was $49,802,615, while production at the eight compounding plants was valued at $959,512. Expenditures for salaries and wages during 1925 totaled $5,775,046.

A summary of the Canadian petroleum industry for the past five years appears in the table at foot of page.

Year	Number of Plants	Capital Employed	Number of Employes	Salaries and Wages	Cost of Materials	Selling Value of Products	Value added by Manuf'cturing
		$		$	$	$	$
1921	16	57,564,588	4,014	6,182,514	36,620,576	52,032,415	16,302,839
1922	19	62,054,029	3,555	5,402,683	38,418,191	57,035,563	18,622,372
1923	20	61,027,704	4,257	5,648,320	36,816,606	46,280,534	9,463,928
1924	25	53,795,794	3,669	5,749,705	37,092,711	49,411,067	12,318,356
1925	21	50,580,549	3,738	5,775,046	38,261,024	50,762,127	12,501,103

Benzol Output Is Increased

NEW YORK, Aug. 30.—Shipments of motor benzol are heavy. An increase in the price of coke of nearly 50 cents a ton over the past fortnight will encourage the by-product oven operators to increase production. The increase in coke prices was due to heavy shipments to Great Britain and the unusually heavy consumption of fuels in the steel industry this summer. Benzol is quoted at 25 cents a gallon in tanks at the works.

Light Gulf Lubes Scarcer

HOUSTON, Aug. 30.—The lighter viscosity grades of Gulf Coastal lubricants are becoming scarcer and total stocks in the Houston district are said to be less than 100 carloads at all plants. Manufacturers in some cases are refusing to contract ahead on the lighter grades because of both the scarcity and their desire to hold goods against higher prices later. Lubricant inquiries generally are reported to be quickening and some new business is being booked on winter contracts.

MINNEAPOLIS, Aug. 19.—A district meeting of the Minnesota Petroleum Association will be held in the Sun-Room of the Kahler Hotel, Rochester, Minn., on Sept. 3, according to an announcement from Paul E. Hadlick, secretary. L. V. Surtees, of the Mid-Continent Petroleum Corp., will be one of the principal speakers.

Eastern and Central Kentucky Markets

ASHLAND & LEXINGTON, KY., Aug. 30.—Kerosene becoming very scarce in both Kentucky districts. Gasolines moving strong with no change in quotations over previous week. Fuel oil and gas oil more active. Today's quotations are:

	Eastern	Central
58-60 Gasoline	13¾	12¾
60-62 Gasoline	14¼	13½
64-60 Gasoline	14½	14
68-70 Gasoline	14¾	..
41-43 Kerosene	10½	11½
24-26 Fuel Oil	5½	5½
Gas oil	7	6

OIL STOCKS AND FINANCES

National Petroleum News

Public is Receiving too Low Prices, Atlantic Refining Head Says

Staff Special

CLEVELAND, Aug. 30

"THE consuming public is receiving the advantage of disproportionately low prices."

This is the statement of J. W. Van Dyke, president of the Atlantic Refining Co., in explaining to stockholders the decrease in earnings of his company in the first six months of 1926 from its earnings in the first six months of 1925.

In the first half of 1925 the Atlantic paid an average of 6.04 cents a gallon for its crude oil and received an average of 12.67 cents a gallon for its finished products, leaving a spread of 6.63 cents a gallon. This year the average paid for crude was 6.90 cents a gallon; it received 13.20 cents a gallon average for its finished products, leaving a spread of only 6.30 cents.

The Atlantic's net profits after all charges including federal income taxes amounted to $3,248,113 in six months this year, an average of $5.09 a share on the $100 common stock after deduction of dividends on the preferred stock and minority interest stock in subsidiaries. Last year the net was $4,225,811, an average of $7.05 on the common. The average net profit for the first halves of the four years, 1922, 1923, 1924, and 1925, was $2,798,445.

The Atlantic's funded debt was reduced $2,687,300 in the first half of this year, including the payment of $2,181,000 on its 4½ per cent notes. On July 1 there was still unpaid $5,807,000 of this obligation which is due by Jan. 1, 1928. This debt, amounting originally to about $15,000,000, was incurred in 1924, after which the company suspended dividends on its common stock. As announced by Mr. Van Dyke in a letter attached to the 1925 annual statement, resumption of dividends is not contemplated until the debt has been paid. Installments have been paid out of current earnings.

In 1925 the Atlantic reduced the note debt by $3,602,000. This amount came wholly from current earnings which were its largest in any year of the last

(Continued on page 111)

Atlantic Refining Co. and Subsidiaries' Consolidated Income Accounts

	1925	1924	1923	1922	1921
Gross income	$137,849,719	$124,283,374	$117,624,931	$116,507,586	$104,521,083
Costs and expenses	118,743,140	107,799,571	106,376,174	100,160,711	98,353,127
Operating income	$ 19,106,579	$ 16,483,803	$ 11,248,757	$ 16,346,875	$ 6,167,956
Other income	1,273,538	1,126,906	1,202,926	1,080,178	1,474,818
Total income	$ 20,380,117	$ 17,610,709	$ 12,451,683	$ 17,427,053	$ 7,642,774
Interest	1,249,222	1,034,250	783,608	864,495	856,060
Deprec., deplet	9,226,335	9,010,226	7,656,500	7,860,365	7,122,436
Insurance	957,231	932,115	896,433	1,056,331	779,432
Inventory adjust	730,179	1,410,744	2,233,930	.....	2,625,106
Federal taxes	1,050,000	525,000	45,577	570,000	.....
Net profits	$ 7,167,150	$ 4,698,374	$ 835,634	$ 7,075,662	*$3,740,261
Dividends	1,401,050	2,400,350	3,400,000	2,400,350	2,405,600
Surplus	$ 5,766,100	$ 2,298,024	*$2,564,366	$ 4,675,312	*$ 6,145,861

*Deficit

Atlantic Refining Co. and Subsidiaries Consolidated Balance sheets as of Dec. 31

ASSETS

	1926	1925	1924	1923	1922
Plant, equipment	$104,384,100	$100,736,571	$ 97,082,800	$ 92,339,828	$ 80,233,444
Depreciation	46,320,350	42,574,423	39,451,390	32,996,934	29,917,801
Net plant, etc	$ 57,963,750	$ 58,162,148	$ 57,631,410	$ 59,342,894	$ 50,315,643
Oil lands, leaseholds	6,660,781	5,789,346	5,742,169	5,191,470	4,620,023
Depletion	3,122,858	3,017,891	2,831,087	2,284,781	2,062,482
Net lands, etc	$ 3,537,924	$ 2,771,455	$ 2,911,082	$ 2,906,689	$ 2,557,541
Investments ass'd cos	5,969,991	7,457,871	8,890,560	8,772,391	6,837,796
Total fixed assets	$ 67,471,665	$ 68,391,474	$ 69,433,052	$ 71,021,974	$ 59,710,980
Cash	3,963,306	2,346,458	1,541,413	2,241,677	1,065,459
Reserve for improve., etc	.....	4,000,000	4,325,000	.....	4,155,972
Acc'ts receive	16,782,850	14,908,517	12,975,939	12,285,551	10,700,706
Notes receive	1,249,027	962,852	718,495	655,605	1,422,244
Inventories	39,554,416	36,995,396	36,364,072	32,760,774	28,648,780
U. S. securities	2,712,194	3,303,906	3,267,969	1,978,668	9,324,903
Other securities	1,038,620	764,720	1,252,067	825,365	3,388,863
Accrued interest	166,112	160,803	167,925	87,233	136,792
Advances to agents	167,720	168,802	155,476	164,513	264,055
Advances to other cos	107,050	150,000	.....	.....	270,316
Deferred items	1,816,923	1,891,364	762,708	603,547	579,740
Sundry assets	9,636	8,980	1,939	9,141	.....
Total	$135,039,519	$134,017,271	$130,986,055	$122,634,048	$119,668,810

LIABILITIES

Acc'ts payable	$ 6,842,973	$ 5,209,588	$ 3,921,300	$ 4,692,457	$ 6,771,652
Notes payable	57,500	.....	3,122	5,404,122	5,182
Income taxes, est	917,116	1,050,000	25,000	45,577	570,000
Accrued liabilities	453,417	273,007	197,606	199,096	116,205
Deferred items	259,554	204,092	439,704	438,887	172,854
15-yr. 5% debentures	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000
4½% notes	5,807,000	8,533,000	12,135,000	.....	.....
Real estate mortgages	150,000	150,000	150,000	150,000	150,000
Marine equip. notes	68,667	248,667	497,333	746,000	.....
Boston Panuco bonds	.....	.....	.....	.....	28,500
Red C Oil Co. oblig	141,000	.....	.....	.....	.....
Federal Warehouse mort	77,700	.....	.....	.....	.....
Insurance, other res	5,333,122	5,213,922	4,835,587	4,660,293	5,035,071
Common stock	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Preferred stock	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Surplus	29,749,385	27,956,911	23,127,006	21,199,762	21,706,630
Minority interests	180,085	178,084	154,397	97,854	112,716
Total	$135,039,519	$134,017,271	$130,986,055	$122,634,048	$119,668,810

Cleveland Stock Market

Aug. 27

	Par	Bid	Asked	Last Sale
Canfield Oil Co	$100	.....	.....	107
do pfd	100	.....	95	95
Fred G. Clark Co	10	3½	4	3½
National Refining Co	25	37½	38	38½
do pfd	100	130½	.....	130¾
Paragon Refining Co	25	8¾	10	8¼
do pfd	100	75	.....	80

Oil Dividends

	Amt.	Stock of Record	Payable
Barnsdall Corp. q. A & B	50c	Oct. 1	Sept. 15
Big Lake	25%	Sept. 29	Sept. 20
Margay Oil q.	25c	Oct. 9	Sept. 20
Phillips Pet q.	75c	Oct. 1	Sept. 15
Pure Oil 5¼% pfd. q	$1.25	Oct. 1	Sept. 10
do 6% pfd. q	$1.50	Oct. 1	Sept. 10
do 8% pfd. q	$2	Oct. 1	Sept. 10
Plymouth Oil m	50c	Sept. 30	Sept. 20
do extra	25c	Sept. 30	Sept. 20
S. W. Pa. Pipe Lines q	$1	Oct. 1	Sept. 15
Texas Co. q	75c	Sept. 30	Sept. 3
Cities Service m	½%	Oct. 1	Sept. 15
do m. stk	½%	Oct. 1	Sept. 15
do pfd. m	½%	Oct. 1	Sept. 15
do Pref. B. m	½%	Oct. 1	Sept. 15

Transactions In Oil Shares on New York Stock Exchange

1925 High	1925 Low	1926 High	1926 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Aug. 28 Sales	First	High	Low	Last	Ch'ge
.....	.....	82⅞	24¼	(sh)	713,000	N.P.	Amerada Corp.	40cQ	July 30, 26	8,500	30⅞	31	30½	30⅝	— ⅛
79¾	48	74	50	(sh)	200,000	N.P.	American Republics	.....	.....	200	58¼	58¼	58	58	—2⅛
47¼	32	50½	44¾	$	56,000,000	$25	Associated Oil	50cQ	July 24, 26	1,300	52	52⅜	52	52⅜	+2⅜
117⅜	95½	128¾	97		50,000,000	100	Atlantic Refining	.....	June 16, 24	6,600	113⅞	114½	110⅝	113	— ⅛
117¾	113½	120	115¾		20,000,000	100	do pfd	$1¾Q	Aug. 2, 26	200	115½	116	115½	116	— ½
35½	18¾	33½	23¾		25,000,000	25	Barnsdall Corp. A	50cQ	July 1, 26	7,800	25¼	26⅜	25⅛	26¼	+1
30	16	29½	23		3,713,275	25	do B	50cQ	July 1, 26	1,600	23½	24⅞	23½	24¾	+1¼
34⅜	23⅞	33⅛	30⅝	$	45,040,125	$25	California Petroleum	50cQ	Sept. 1, 26	17,400	32¼	32⅝	32	32⅜	+⅜
70	42⅜	94½	50		23,542,500	100	General Asphalt	.....	.....	227,300	88	*94½	84	92	+3⅝
100	86⅜	140⅜	94⅞		7,416,000	100	do pfd	$1¾Q	Sept. 1, 26	5,000	132	*140⅛	127½	140⅛	+8⅛
59⅛	42	70⅛	49½		29,429,550	25	General Petroleum	75cQ	June 1, 26	100	62½	62½	62½	62½	—4¾
85	59	72	50¼		25,000,000	100	Houston Oil	.....	.....	1,600	58	59	57¾	59	+1
41¾	18¾	34	19⅛	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	July 19, 26	13,900	24⅞	25⅛	23⅜	24⅝	+ ⅛
14¼	5½	13¾	9	$	3,204,590	$10	Indian Refining	.....	Dec. 15 20	2,300	9⅝	9⅝	9⅜	9½	— ¼
12⅜	6	12½	8		4,545,860	10	do ctfs	.....	.....	600	9⅝	9⅝	9½	9½	0
110	77	104	90		2,296,400	100	do pfd	.....	Dec. 15, 21	100	95⅛	95⅛	95⅛	95⅛	+2⅛
1½	¾	¾	¼		1,678,760	10	Kansas & Gulf	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	24½	19¾	(sh)	4,000,000	N.P.	Lago Oil & Transport	.....	.....	24,200	22	22	21⅝	21⅞	+ ⅛
23¾	13¾	19¾	12	(sh)	1,131,216	N.P.	Louisiana Oil Refining	.....	.....	3,200	16	16	15½	15⅞	0
.....	.....	97	93½	$	4,000,000	$100	do pfd	$1⅝Q	Aug. 16, 26	200	95⅜	95⅜	65⅜	95⅜	— ⅝
85½	20¾	28⅞	20¾	(sh)	330,000	N.P.	Maracaibo Oil	.....	.....	2,600	23⅝	24⅜	23	23¾	+1½
60½	32¾	63⅜	49¾	(sh)	1,895,825	N.P.	Marland Oil Co	$1Q	June 30, 26	56,800	57⅝	58½	56⅝	58⅛	+ ⅛
250	225	.....	.....	$	45,942,800	$100	Mexican Petroleum	$5Q	July 20, 26	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	100	do pfd	$2Q	July 20, 26	.....	.....	.....	.....	.....	.....
22½	9	13¾	6	(sh)	945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	7,400	11	11½	10⅝	11½	+1½
38	25¾	37	27½	(sh)	1,357,800	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 23	22,400	31⅛	32¼	30½	32	+ ⅛
94¾	83	100⅜	90	$	6,718,000	$100	do pfd	$1¾Q	Sept. 1, 26	100	98	98	98	98	0
8¾	⅝	2½	1⅛		25,415,540	10	Middle States	.....	July 1, 23	5,400	1⅜	1⅜	†1⅜	1¼	0
1¾	1¼	1⅜	⅞		4,384,680	.....	do ctfs	.....	.....	100	⅞	⅞	⅞	⅞	0
78½	51¾	83¼	1	(sh)	3,500,000	N.P.	Pacific Oil	$1.50S.A.	Jan. 20, 26	5,200	1½	1⅝	1½	1½	— ⅛
85⅛	59½	76½	56⅜	$	48,307,400	$50	Pan American P. & T	$1.50Q	July 20, 26	200	67	67¼	67	67¼	+1¼
84½	60⅜	78⅜	56⅞		91,025,100	50	do B	$1.50Q	July 20, 26	25,700	68	68¼	66½	68	+1⅛
49¾	37¼	46	34	(sh)	400,000	N.P.	Pan American Western B	50cQ	July 30, 26	2,500	37½	38	37	37½	0
6¼	2¼	32	4¾	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	7,500	16¾	17⅜	15¼	17½	+ ½
60½	37	99⅜	51	$	2,935,200	$100	do pfd	.....	July 2, 23	.....	.....	.....	.....	.....	.....
47⅜	36¾	49½	40	(sh)	2,406,692	N.P.	Phillips Petroleum	75cQ	July 1, 26	39,800	48⅛	48⅛	46⅞	47⅞	— ⅛
3½	1¼	1⅞	⅝	$	29,622,925	$25	Pierce Oil Corp	.....	.....	1,100	⅝	⅝	⅝	⅝	0
40	20¾	27⅝	13½		15,000,000	100	do pfd	.....	Feb. 1, 22	.....	.....	.....	.....	.....	.....
8¼	4½	7	3	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	6,300	2⅞	3	2¾	3	0
82⅝	12½	17½	11	$	11,467,850	$50	Producers & Refiners	.....	Sept. 15, 23	1,900	11⅛	12¼	11⅛	12	+ ½
47⅝	27	35	30¾		2,845,350	50	do pfd	.....	May 1, 25	300	31⅛	32	31	32	+ ⅛
33¾	25⅛	31	25¾		75,959,250	25	Pure Oil Co	37½cQ	Sept. 1, 26	4,000	26⅝	26⅞	26¼	26⅞	+ ¼
108½	103	112¾	106		13,000,000	100	do 8% pfd	$2Q	July 1, 26	300	112	112	112	112	+ 1
57⅜	48¾	57⅜	49¼	(sh)	691,922	13.40	Royal Dutch, N. Y. shares	$1.739	Aug. 2, 26	4,800	51⅛	51⅝	50⅝	51⅛	—⅛
49	39½	48⅝	41	(sh)	95,345	£2	Shell Transport & T	$1.21	July 24, 26	.....	.....	.....	.....	.....	.....
28¾	21¾	29¾	24	(sh)	10,000,000	N.P.	Shell Union Oil	35cQ	June 30 26	21,300	29⅜	*29¾	29	29⅝	+ ⅛
106½	99½	114	103	$	20,000,000	$100	do pfd	$1½Q	Aug. 15. 26	100	106¼	106¼	106¼	106¼	—2½
28½	17¾	28⅝	15⅜		7,207,620	10	Simms Petroleum	50cS.A.	July 1, 26	30,600	16¼	19⅛	16¼	19	+2½
24⅞	17	24⅞	19⅜	(sh)	4,489,887	N.P.	Sinclair Consolidated	.....	May 31, 24	12,600	21½	21⅝	20½	20¾	— ½
94⅜	78¾	99½	90	$	17,852,200	$100	do pfd	$2Q	Aug. 15, 26	200	98¼	98½	98	98	—1
32½	21¾	36⅞	26⅝		23,988,590	25	Skelly Oil Co	50cQ	June 15, 26	28,400	36⅜	36½	35	35⅝	— ⅛
.....	.....	62⅞	52¾	(sh)	13,016,484	N.P.	S. O. California	50cQ	June 15, 26	40,600	61⅛	62⅝	60½	62⅝	+1⅛
47½	38¾	46⅜	40¼		515,109,675	25	S. O. New Jersey	25cQ	June 15, 26	33,500	43⅛	43¾	x42⅞	43⅝	— ¼
119	116¼	119⅝	115¼		199,972,900	100	do pfd	$1¾Q	June 15, 26	3,700	116⅞	117	x115¼	115¼	—1¾
43⅞	38⅜	41⅝	30⅝	(sh)	1,103,931	N.P.	Sun Oil	25cQ	June 15, 26	800	31	31½	x30¾	30¾	— ¾
6⅜	2	4¼	1	(sh)	1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20, 20	7,800	1¾	2⅛	1½	2	+ ¼
55	42¾	56	48	$	164,450,000	$25	The Texas Co	75cQ	Mar. 31, 26	26,800	54½	54¾	53	54¾	+ ⅜
23¾	10⅞	19½	12⅜		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	5,100	14¾	14¾	14⅜	14¾	+ ⅛
36¾	30¼	39¼	30	(sh)	2,137,570	N.P.	Tide Water Oil Co	$7½c	June 30, 26	700	30⅜	30½	30⅜	30½	0
101	99	103	90	$	20,672,900	$100	do 5% pfd	$1.25Q	Aug. 15, 26	400	92½	93	92¼	93	+ ½
5⅞	3½	5½	3	(sh)	3,742,029	N.P.	Transcontinental Oil	.....	.....	23,200	4¾	4⅞	4½	4¾	0
43⅜	33	58	37¼	$	40,480,800	$25	Union Oil of California	50cQ	Aug. 10, 26	25,300	52⅛	53	50½	52⅞	+ ⅝
134	96¼	102	80		24,423,300	100	Union Tank Car Co	$1¼Q	Sept. 1. 26	4,900	93½	*102	93½	102	+8¾
117⅛	113¼	118	113¼		12,000,000	100	do pfd	$1¾Q	Sept. 1 26	100	116⅛	116⅛	116⅛	116⅛	+ ⅞
31¾	25½	29¼	25⅛	(sh)	490,000	N.P.	White Eagle Oil & Refining	50cQ	July 20, 26	1,800	25¾	26	25½	26	0

*New High †New Low xEx-dividend Total Sales 784,400

Pittsburgh Stock Exchange

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions Week Ended Aug. 27 Sales	First	High	Low	Last	Ch'ge
.....	.....	6¾	6⅜	N.P.	Andes Petroleum	.....	.....	.....	.....	.....	.....
8¼	5¼	7	5¾	$10	Arkansas Nat. Gas	1,850	6	6	5⅞	5⅞	— ⅛
.....	.....	81	79¾	....	Columbia Gas (w.i.)	37	79¾	79¾	79¾	79¾	—1¾
.....	.....	96¼	95	$100	Col. Gas& El.pfd w.i.	33	96¼	96¼	96¼	96¼	+1⅛
18	14½	17	12½	$10	Devonian Oil	1,167	16¾	17	16¾	17	+ ¼
112⅜	105⅛	115½	112	$100	Duquesne Lt. 7s pfd	65	115¼	115¼	115	115	— ¼
.....	.....	10	5½	N.P.	HoustonGulfGas(w.i.)	1,400	7	7	6½	6½	— ¼
.....	.....	42½	30	25	Lone Star Gas Corp	2,357	39	39	38½	38⅞	—1
.....	.....	.....	.....	....	Lone Star Gas rights	705	2½	2⅝	2½	2⅝	— ⅛
87¼	81	48½	33⅜	25	Ohio Fuel Corp	7,587	41⅝	41¾	41⅜	41½	— ⅛
.....	.....	5	5	....	Ohio Oil & Gas	.....	.....	.....	.....	.....	.....
34	26	34	28	25	Oklahoma Nat. Gas	3,289	28	*†28¾	28	28½	+ ¼
8¾	5	5⅜	5⅛	5	Pittsburgh O. & G	1,171	5⅜	4	5⅜	4	+ ⅛
9⅝	6	10	8	10	Salt Creek Cons	500	8¾	8¾	8¾	8¾	— ¼
13¾	8½	12	8	10	Tidal Osage	3,580	11	*12	11	12	+1
.....	.....	42	40¾	N.P.	*Waverly Oil Wks	10	42	42	42	42	0

**Buyers' option, 30 days

Pittsburgh Curb Market

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions Week Ended Aug. 27 Sales	First	High	Low	Last	Ch'ge
2½	.60	3⅜	2¼	$ 5	Colombia Synd	1,500	2½	2½	2½	2½	.....
.60	.15	.15	.15	5	Duquesne Oil	.....	.....	.....	.....	.....	.....
9	5½	.....	.....	10	Forest Oil	.....	.....	.....	.....	.....	.....
99⅜	64	91½	85	25	Gulf Oil Corp	.....	.....	.....	.....	.....	.....
12½	3¼	12	7½	N.P.	Leonard Oil & Dvlp	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	....	LoneStar rights (w.i.)	.....	.....	.....	.....	.....	.....
.....	.....	1⅝	1⅜	N.P.	Mountain & Gulf	.....	.....	.....	.....	.....	.....
2¾	1⅜	.....	.....	1	Oklahoma Eastern	.....	.....	.....	.....	.....	.....
.47	.20	.35	.15	10	Omar O. & G	.....	.....	.....	.....	.....	.....
.....	.....	2	1¾	5	Pittsburgh Oil Dev	.....	.....	.....	.....	.....	.....
27½	25	33½	26	10	Plymouth Oil	725	30½	30½	30	31	0
7	3	5½	3	5	States Oil	100	4¼	4¼	4¼	4¼	.....
4	1⅞	3½	2⅛	$ 1	Texon Oil & Land	590	3⅛	3⅛	3	3⅛	+ ⅛
11	9	9½	8	10	TidalOsage(non-voting)	.....	.....	.....	.....	.....	.....

*New High †New Low xEx Dividend ‡Ex-Rights

NEW YORK BONDS

Week Ending Aug. 27

	High	Low	Last	Ch'ge
Associated Oil gold 6s	103	102¾	102¾	.....
Atlantic Refg. deb 5s	102	101	101¼	+ ⅛
Barnsdall Corp. 6s	97¼	96¾	97	— ⅛
Cal. Petrol sf6½s	104	103½	104	— ¼
Empire Gas & Fuel 7½s	103½	102⅞	103	0
Empire Gas & Fuel 6½s	97¾	97	97⅜	— ¼
Gen. Asphalt 6s	108	108	108	+1¼
Gen. Petroleum 5s	100¼	100	100⅛	+ ⅛
Humble Oil & Refg. 5½s	102⅝	102	102⅝	+ ⅛
Mid-Cont. Pet. 6½s	104⅛	104	104¼	0
Pan-Amer. P & T. 7s	105⅜	105⅜	105⅜	0
Pan-Amer. P. & T. 6s	106¼	105⅞	106¼	+ ½
Prod. & Refgrs. 8s	111	111	111	0
Sinclair Con. Oil Col. 7s	99½	99⅛	99⅛	0
Sinclair Con. Oil Con.6½s	93	92½	92½	— ½
Sinclair Con. 2 6s	104½	103½	104	— ¼
Sinclair Crude Oil 6s	101⅝	100⅞	101⅛	+ ⅛
Sinclair Pipe Line sf 5s	92	91½	91⅝	0
Skelly Oil 6½s	146¾	142	143½	— ½
Union Oil of Cal. 6s-A	108⅛	107½	107½	— ½
Union Oil of Cal. 5s-B	101⅛	101⅛	101⅛	0
Union Oil of Cal. 5s-C	98½	98¼	98⅛	— ⅛

NEW YORK CURB BONDS

Week Ending Aug. 27

	High	Low	Last	Ch'ge
Cities Serv. 6s '66	93½	93	93¼	— ⅛
Cities Serv. 7s "D" '66	113⅛	112⅛	112⅛	— ½
Cities Serv. 8s "E" '66	119	119	119	0
Galena S O 7s '30	92⅞	92½	92⅞	+ ⅜
General Pet. 6s '28	101⅜	101⅛	101⅛	— ⅛
Gulf Oil 5s '37	101⅛	100¾	100¾	+ ⅛
Gulf Oil 5½s '37	100½	100½	100½	+ ⅛
Gulf Oil 5½s '28	101	101	101	0
Indepen. Oil 6½s '31	96½	95½	96½	+ ½
Pan Amer. Pet. 6s '40	102⅝	102½	102⅝	0
Pennok Oil 6s '27	100	100	100	0
Pure Oil 6½s '33	103¾	103¼	103⅜	— ⅛
S O N Y 6½s '33	106¼	106	106	+ ⅛
Sun Oil 5½s '39	99⅝	99⅜	99⅝	+ ⅛
Tidal Osage 7s '31	104⅝	104⅝	104⅝	+ ⅛
Trans. Cont Oil 7s '30	98	97½	97½	— ½
United Oil Prod. 8s '31	40¼	40	40	0

Standard Oil Stock Traded in New York Curb Market

1925 High	1925 Low	1926 High	1926 Low		Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Aug. 28 Sales	First	High	Low	Last	Ch'ge
26⅝	17¼	19¾	16⅜	£	4,000,000	£1	Anglo American	60¾cS.A.	May 27, 26	4,300	17⅝	18½	17	†18½	+ ⅝
.....	.....	18½	16½		.....	£1	do ctfs non votg	.....	.....	4,100	17⅝	17¾	17⅜	17¾	+ ½
4¼	1⅜	2¼	1⅜	(sh)	500,000	N.P.	Atlantic Lobos	.....	.....	100	1½	1½	1½	1½	0
12⅜	8	5	8¼	$	10,000,000	$10	do pfd	.....	.....	.....	.....	.....	.....	.....	.....
240	205	295	226		1,000,000	100	Borne Scrymser	$4S.A.	Apr. 15, 26	10	285	285	285	285	0
72	53½	59½	46¾		10,000,000	50	Buckeye Pipe Line	$1Q	June 15, 26	550	47¼	47¼	46¾	47¼	+ ½
74	48½	75¼	65		3,000,000	25	Chesebrough Mfg	75cQ	June 30, 26	.....	.....	.....	.....	.....	.....
115	110	.....	.....		1,000,000	100	do pfd	$1¾Q	June 30, 26	.....	.....	.....	.....	.....	.....
31⅜	21⅜	25⅞	19½		84,914,280	10	Continental Oil	25cQ	June 15, 26	6,100	20¾	20¾	20⅜	20½	— ⅜
17½	10	17	15½		1,500,000	25	Crescent Pipe Line	.....	Sept 15, 25	300	16⅜	16¼	16⅛	16¼	+ ⅛
156	132	137	107½		3,000,000	100	Cumberland Pipe Line	$3Q	June 15, 26	30	112¾	114	112	114	+1½
96	61	63¾	47¾		5,000,000	100	Eureka Pipe Line	$1Q	Aug. 2, 26	50	49	49	49	49	0
68½	23¼	32½	17		16,000,000	100	Galena Signal Oil	.....	June 30, 25	450	20	20	19½	20	— ⅜
105	88	94½	65		4,000,000	100	do new pfd	$2Q	June 30, 26	50	71	71	70	70	+2
114	95	97½	66		2,000,000	100	do old pfd	$2Q	June 30, 26	.....	.....	.....	.....	.....	.....
95	42¾	68¾	53½		72,916,650	25	Humble Oil & Refining	50cQ	July 1 26	10,500	60	62¾	59⅝	60¾	+1½
154½	127	144½	131		20,000,000	100	Illinois Pipe Line	$6S.A.	June 30, 26	120	134½	134½	134	134	0
39¼	27¼	38¾	31⅝	sh	6,491,852	N P	Imperial of Canada	25cQ	Sept. 1, 26	5,200	36⅜	36¾	36⅛	36¾	+ ⅛
84	57⅛	70	58	$	5,000,000	50	Indiana Pipe Line	$1Q	Aug. 14 26	50	59	59	59	59	0
353⅛	22⅛	353¼	284¾	sh	7,118,138	N P	International Petroleum	25cS.A.	Aug. 15, 26	7,700	333¼	347⅞	331½	337⅞	+ ⅜
255⅛	16½	205⅛	133⅛	$	6,362,500	$12½	National Transit	25cS.A.	June 15, 26	400	14½	14½	14⅛	14⅛	— ⅜
79	49¼	51⅜	33¼		5,000,000	100	New York Transit	$1¼Q	July 15, 26	100	35	35	34½	34½	—2½
88	67½	80½	68		4,000,000	100	Northern Pipe Line	$3S.A.	July 1, 26	100	73	73½	73	73½	+1½
75¼	60¾	67¾	55¾		60,000,000	25	Ohio Oil Co	50cQ	June 30, 26	1,100	59⅜	60	58⅞	59	— ½
44½	19	24¾	15		10,000,000	25	Penn Mex Fuel	.....	May 21 25	.....	.....	.....	.....	.....	.....
65½	45⅞	60¼	48		60,000,000	25	Prairie Oil & Gas	50cQ	Aug. 31, 26	4,100	51	51	50½	50⅝	— ⅛
129¾	106	127½	122½		81,000,000	100	Prairie Pipe Line	$2Q	July 31, 26	800	125	125	124¾	124¾	— ¾
254	200	220	184½		4,000,000	100	Solar Refining Co	$5S.A.	June 19, 26	150	208	208	203	203	—6
103	68	74⅜	25		10,000,000	100	Southern Pipe Line Co	$1Q	Mar. 1, 26	400	24¾	25	24½	25	0
47½	45	50	34½		20,000,000	25	South Penn Oil Co	37½cQ	June 30, 26	1,000	37½	37½	37	37½	— ½
84	50	56	49		3,500,000	100	South West Pa. Pipe Line	$1Q	July 1, 26	50	52½	52½	52½	52½	+1¼
70¾	59½	70½	61¼	$	223,756,258	$25	S. O Indiana	62½cQ	June 15, 26	14,300	63⅝	63⅞	63⅜	63¾	0
46	30⅛	36½	19⅝		8,000,000	25	S. O. Kansas	.....	June 16, 24	2,400	21⅜	21⅜	19⅛	19⅛	—2¾
137	114¾	134⅜	108		16,864,434	25	S. O Kentucky	$1Q	June 30, 26	500	123⅝	124	123	123	— ½
270	231	275	188		4,500,000	100	S. O. Nebraska	$5S.A.	Dec. 19, 25	.....	.....	.....	.....	.....	.....
.....	.....	51⅜	42		4,518,000	25	do new w.i	$1.25S.A.	June 21, 26	1,100	48⅞	48⅞	x47½	47½	—1½
48⅜	40¾	47¼	30¾		358,102,000	25	S. O New York	35cQ	June 15, 26	26,700	32⅛	32⅝	31⅞	32⅛	— ⅛
369	388	368	290½		14,000,000	100	S. O. Ohio	$2½Q	July 1, 26	.....	.....	.....	.....	.....	.....
123	116	122	117		7,000,000	100	do pfd	$1¾Q	Sept. 1, 26	.....	.....	.....	.....	.....	.....
27	12	23	15½		1,722,931	25	Swan-Finch Co	.....	Nov. 1, 19	50	17½	17½	17½	17½	0
109½	80¾	112	95¾		81,919,950	25	Vacuum Oil Co	50cQ	June 19, 26	1,800	101⅝	102½	101⅝	102¼	+ ⅜

New York Curb Market

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions week ended Aug. 27 Sales	First	High	Low	Last	Ch'ge
11½	2½	14½	5	$ 5	Amer. Maracaibo	2,000	6	6	5½	5¾	— ¼
8⅜	5	6¾	5¾	$10	Arkansas Nat. Gas.	900	5⅞	5⅞	5¾	5¾	0
.....	.....	19¼	14⅛	N.P.	Beacon Oil	1,200	17½	17¾	17⅛	17⅛	— ⅜
47½	38	.....	.....	$25	British-American	10,000	14⅝	15⅝	14⅜	15	+ ⅜
10¼	2¾	22⅞	9¼	25c	Carib. Syndicate	10,000	14⅝	15⅝	14⅜	15	+ ⅜
43	35	44½	37½	$20	Cities Service	14,600	44⅛	*44½	43⅜	44¼	+ ¼
85⅜	80¼	89¼	82⅜	100	do pfd	4,000	89¼	89¼	88¾	89	— ¼
8	7¼	7⅞	7⅜	10	do pfd. B	100	7¾	7¾	7¾	7¾	0
21⅜	17½	22	19	10	do bankers' sh	.....	.....	.....	.....	.....	.....
2¾	.60	3½	2	N.P.	Colombia Syndicate	19,600	2¾	2¾	2	2	— ½
15	8¼	15⅜	10	N.P.	Creole Syndicate	5,400	14⅜	14½	14⅜	14⅜	0
12¼	5	7⅜	1⅜	N.P.	Crown Central	2,300	2	2⅛	2	2⅛	0
7	2	4	1 1/16	N.P.	Derby Oil & Ref	100	3¼	3¼	3¼	3¼	0
27	10½	19	13	N.P.	do pfd	.....	.....	.....	.....	.....	.....
.....	.....	2¼	.88	.....	Euclid Oil	15,400	1⅜	1 1/16	1 1/16	1⅜	0
6	1⅜	7½	3⅜	N.P.	Gibson Oil	29,700	3¾	3⅞	†3⅜	3¾	— ⅛
3¾	1⅜	2	.63	N.P.	Gilliland v.t.c	4,100	1	2	1	1⅜	+ ¼
98¼	63½	98¾	82	$25	Gulf Oil Corp	1,000	84½	85⅜	84½	85⅛	+ ¼
5⅞	2¼	4	1½	N.P.	Kirby Petroleum	1,400	2	2	†1½	1⅞	— ⅛
13	6	12¼	5¾	N.P.	Leonard Oil & Dev.	500	7⅝	7¾	7⅝	7¾	+ ⅛
25⅞	18	25¾	20	N.P.	Lion Oil Refining	900	21½	21½	21⅛	21⅛	— ⅜
.....	.....	42	31½	$25	Lone Star Gas	300	38	38	38	38	—1
4¼	1¾	3⅜	2	N.P.	Marland of Mexico	.....	.....	.....	.....	.....	.....
5¾	.56	5½	3⅜	$10	Mexican-Panuco	7,400	3¾	4	3¾	4	0
2	1	1¾	1⅜	1	Mountain & Gulf	100	1⅜	1⅜	1⅜	1⅜	0
26¼	18⅜	26	23	10	Mountain Prod	5,200	24¾	24⅞	24½	24½	— ¼
6¾	3⅝	6¾	5¼	5	New Bradford	1,200	5¾	5¾	†5½	5⅝	0
24¾	16¼	11¾	2	10	New En land Fuel	100	6¼	6¼	6¼	6¼	—1
19⅜	6¼	17	9⅜	1	New Mex. & Ariz	1,100	12	12¼	11½	11½	— ⅜
12½	8¼	17	8	$25	New York Oil	1,400	10½	10⅞	10	10½	0
37	14	36	34¼	$25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
.....	.....	9⅞	7¼	.....	Pandem	1,500	8⅜	8⅜	7⅞	7⅞	— ¼
2½	.90	2¾	.50	N.P.	Peer Oil Corp	1,000	.65	.65	.58	.58	—.02
28¼	16	22¾	14½	$10	Pennok Oil	200	17¾	17¾	17¼	17¼	— ½
44½	16	38	14⅛	$5	Red Bank Oil	1,500	29⅞	32½	28	32½	+2½
33½	19	28¾	14½	N.P.	Reiter-Foster	6,300	26½	27½	22½	23¾	—2¾
.....	.....	.....	.....	$25	Richfield Oil w.i	400	26¾	26¾	26⅜	26⅜	0
9½	3½	7¼	4⅝	N.P.	Ryan Consolidated	.....	.....	.....	.....	.....	.....
9¾	6⅜	10	8	$10	Salt Creek Cons	800	8¾	8⅞	8¾	8¾	— ⅛
35	24	36	28⅞	10	Salt Creek Prod	1,700	30¾	30¾	30¼	30¼	— ⅜
3⅞	1	4	1⅜	5	Savoy Oil	.....	.....	.....	.....	.....	.....
13¾	9	12½	7⅝	10	Tidal Osage	3,900	12⅜	12⅜	11⅝	11⅝	— ⅜
10⅞	8	12	8¼	10	do non-voting	800	10½	10½	9	9⅛	—2⅜
.....	.....	27	21	N.P.	Tide Water Assoc	4,200	24⅝	24⅝	24¼	24½	— ⅛
.....	.....	99¾	97½	100	" " " pfd	500	97½	97½	97½	97½	0
4⅞	1¾	8	4¼	5	Venezuelan Pet	7,300	6	6⅝	6	6⅝	+ ⅛
.....	.....	29¾	23½	N.P.	Warner-Quinlan w.i	300	28¼	28¾	28⅛	28⅛	— ⅜
31¼	22⅛	36⅛	22	N.P.	Wilcox O. & G. new	3,300	31½	31½	29½	29½	—1⅜
7	3⅞	7¾	4⅜	N.P.	Woodley Petroleum	200	6	6	6	6	+ ¼

*New High †New Low xEx-Dividend.

New Booklet

CONTINENTAL OIL COMPANY

A comprehensive report on the properties and operations of this Company, together with a map showing the scope of its activities, is contained in our new 24-page Booklet.

Copy upon request

CARL H. PFORZHEIMER & CO.

Specialists in Standard Oil and Miscellaneous Oil Securities

25 Broad Street New York

(Continued from page 108)

five years, exceeding the 1922 return by almost $100,000. The net on common was $11.53 a share, compared with $6.59 a share in 1924.

At the end of 1925 the Atlantic's common stock had a net worth of $156 a share, a gain of $10 a share during the preceding 12 months. The increase was made although $6,294,000 of its old plant was scrapped. Expenditures for new plant and equipment during the year totaled $11,882,000, divided as follows; manufacturing department $5,047,000; sales department $2,996,000; crude producing and purchasing department $3,096,000, and miscellaneous $743,000. Of the total $1,887,000 represented partial replacements.

The Atlantic's balance sheet of June 30 shows a decrease in the ratio of current assets to current liabilities, but ratio still was approximately 8 to 1.

The surplus was adjusted downward by $695,665 in the first half year. This revision included bringing the Atlantic's holdings in Superior Oil Corp. into line with market quotations for Superior stock.

Consolidated income accounts for the Atlantic and subsidiaries for the first halves of 1925 and 1926 compare:

	1926	1925
Gross income	$75,927,193	$65,207,739
Material costs, operations, expenses	67,255,273	55,239,293
Operating income	$ 8,671,920	$ 9,968,446
Other income	684,508	532,835
Total income	$ 9,356,428	$10,501,281
Interest	575,726	641,089
Deprec., deplet.	4,610,803	4,369,396
Insurance	522,986	464,985
Federal taxes	398,800	800,000
Net profits	$ 3,248,113	$ 4,225,811
Preferred and minority stock dividends	700,350	701,050
Surplus	$ 2,547,763	$ 3,524,761

Financial Notes

Pandem Oil Corp.—Earnings of $230,217 after drilling, general, administrative and geological expenses, but before depreciation depletion and federal taxes. Of that amount $136,882 was the net in the quarter ended June 30 and $93,335 in the first quarter of 1926. In last quarter of 1925 earnings amounted to $29,029. Present crude production approximates 1,000 barrels a day.

Derby Oil & Refining Co.—Net earnings for July were $27,594 after depreciation and depletion, compared with $12,951 in June.

Pure Oil Co.—Rawleigh Warner, vice-president and treasurer of Dawes Bros., Inc., Chicago, elected treasurer and director of Pure as of Sept. 1.

Richfield Oil Co. of California—Common stock, par $25 a share, admitted to New York Curb Market on "when issued" basis.

THE OIL INDUSTRY EXCHANGE

Market Section

Positions Wanted

Sludge Acid Recovery. Man thoroughly familiar with construction and operation, bottles to hot air concentration, desires connection. Box 685.

Man with experience in Educational Work, Sales Managership, in fact everything from selling up in oil business, wishes change. Now employed. Box 686.

Superintendent at present employed, experienced with high and low pressure, vacuum asphalt and complete refinery operations, desires new connection. Reply Box 681.

Former Army Officer, excellent record as administrator and executive, experienced in marketing oil, also installation of bulk and filling stations, desires position with reputable oil company. Spent fourteen years in tropics and speaks Spanish. Now living in Ohio but will go anywhere. Box 682.

Young Man, six years Supervisor of Sales and Service for large Mid-Western jobber, desires similar position. Experience covers jobbing, marketing, and retailing petroleum products in detail, with specialized training. Capable **organizing or reorganizing entire company or division.** Location immaterial. Married, Age 26. Good reason for wanting change. Box 676 Care of National Petroleum News.

Situations Open

SALESMAN WANTED

A large Eastern oil marketing company have an opening for a high grade and thoroughly experienced salesman to sell gasoline and lubricating oils in tank cars to the trade.

Prefer party acquainted with Atlantic Seaboard Territory, South of New York State.

State age, if married or single, experience, references and salary willing to start at.

This is an exceptional opportunity. Address Box 687.

UNUSUAL PROPOSITION FOR SALESMEN

A highly rated old established concern has several openings for responsible representatives to call on oil companies and gasoline filling stations.

We manufacture a gauge which measures to a gallon the liquid in underground tanks. No experiment, as hundreds are already in use. Patented and no competition. We pay liberal commission of 30% which means $12.00 on every machine sold.

Prefer men with clientele among Oil Companies and Filling Stations. Unlimited possibilities for the right man. A-1 References required. Box 684.

Miscellaneous

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For "Position Wanted" advertisements—5 cents per word. Minimum cost $1.00. All other classified advertising—10 cents per word. Minimum cost $3.00. Advertisements set in special type or with border—$4.00 per column inch. Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

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OLD ESTABLISHED important ENGLISH FIRM of IMPORTING AGENTS and BROKERS with SALES-ORGANIZATION covering merchant trade connections over GREAT BRITAIN are open to consider AGENCY REPRESENTATION of important AMERICAN REFINERY for LUBRICATING OILS —also other PETROLEUM PRODUCTS SPECIALTIES.
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Care National Petroleum News,
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My office is nothing more than a clearing house for Seller and Buyer of

Petroleum Products

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178.
L. D. 136

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WAX PRESS WANTED

48" Diameter equipped with ½" spacing rings, blankets and plates complete. Give detailed specifications, stating length of press over all and length of ram.

Box 674, care National Petroleum News.

For Sale

BULK PLANT and SERVICE STATIONS

Located 25 miles out of Cleveland. Gallonage one million per year.
Box 673.

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New and Slightly Used

We have the following refinery pumps for sale at a great saving. Some are new —the balance used but a short time. They can be inspected at our plant.

3—Wilson - Snyder Vertical, Size 14x9x24

4—Dean Bros. Vertical, Size 10x12x24

1—Dean Bros. Horizontal, Size 10x12x14x12

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